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COLONY OF MAURITIUS.

ANNUAL REPORT

ON THE

MEDICAL

AND

HEALTH DEPARTMENT

FOR

1907.



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ANNUAL REPORT
ON THE
Medical and Health Department
FOR 1907.

I.—STATISTICS OF POPULATION.

On 31st. December 1907 the population of the Colony, as estimated by the Registrar General, amounted to 376,635. This figure shows an increase of 1,235 when compared with that of the previous year.

The increase is due to natural factors alone, as the births, contrary to what was recorded last year, have exceeded the deaths by 1,149, while the balance in favour of immigration, as will be seen below, was only 86.

The number of immigrants, 4,264, and that of emigrants, 4,178, show, on comparison with the figures which obtained last year, but little variation, establishing, as stated, an increase of population due to immigration of only 86.

During the year under review there have been 13,037 deaths giving a death-rate of 34.7 per mille. These figures compare very favourably with the 15,379 deaths and 40 per thousand mortality recorded in 1907.

The birth-rate which had fallen steadily from 37.6 in 1904 to 37 per thousand in 1905 and to 33.5 in 1906, has risen to 37.7 during the year under review.

Annexure I(a) which contains figures kindly supplied to this Department by the Registrar General and from which these statistics have been calculated, gives the various elements constituting the population of the Colony during the past year.

II.—PREVALENCE OF SICKNESS.

23,355 patients were admitted into the different Hospitals and Asylums of the Colony during the year. There has been consequently an increase of 2,984 on the number of the previous year during which only 20,371 admissions had taken place. The case-mortality 5.34 o/o for the same period, shows a reduction of .51 o/o when compared with that of 1906 which was 5.85 o/o; but the number of cases treated in the Dispensaries, 55,635, contrary to what occurred in the Hospitals, shows a decrease of 719 on comparison with that of 1906 which was 56,354.

The increased birth-rate, diminished death-rate and reduced case-mortality besides the decrease in the Dispensary attendances, show that the sanitary condition of the Colony in 1907 was better than that of 1906, as the increase in the Hospital admissions is apparently due, not to a higher morbidity,

but to other factors, the principal being the straitened circumstances of many in consequence of the financial crisis which had made itself felt already towards the latter part of 1907, and a recognition of the advantages of hospital treatment against which former prejudice appears to be fast waning away.

Malarial Fever :—Malarial Fever accounts for 4,272 admissions in the Hospitals showing an increase of 598 over the figure for 1906 when, it should be remarked, the epidemic was not severe.

The admissions, with the exception of 1,453 cases in which, from various circumstances, a more accurate diagnosis could not be arrived at, were classified under the following types :—

Quotidian	...	...	1,796
Tertian	...	...	336
Quartan	...	...	78
Irregular	...	...	347
Remittent	...	...	237
Pernicious	...	...	25
<hr/>			
Total	...	...	2,819
Unclassed		...	1,453
<hr/>			
Grand Total		...	4,272
<hr/>			

The disease terminated fatally in 46 cases, the case-mortality, viz : 1.06 o/o being slightly greater than that of 1906 when it stood at 1.02 o/o.

Hypertrophy of the Spleen :—816 patients were admitted for that complaint against 656 during the year previous, giving an increase of 160. The number of deaths, however, has shown a marked decrease being 20 against 40 in 1906.

As observed in previous reports, under this heading are also entered cases of malarial cachexia with enlarged spleens. It may besides be remarked in this connection that further investigations have been carried out with a view to ascertain whether any patient suffering from splenomegaly are affected with Kala-Azar; but the results tend to establish that the Colony is fortunately free from that very serious affection.

Dysentery :—This disease is answerable for 1,286 admissions, which figure is considerably higher than that of 1906 when only 794 patients had been admitted for that cause. The case-mortality has fortunately been steadily diminishing being 17.2 o/o in 1904; 16.5 in 1905, 14.9 in 1906 and 13.5 in 1907, the year under review. The reasons for this heavy increase in cases will be discussed further on.

Enteric Fever :—The total number of cases of that disease notified in compliance with the Contagious Disease Ordinance was 145. The deaths numbered 37. Only 20 of these patients were treated in the Hospitals where 6 deaths took place. The high death-rate shows that apparently only the more severe cases have come under private medical care or found their way to hospital.

The following Table shows the monthly incidence of the disease in the different districts of the Colony :—

Months.	Districts.									Total.
	Port Louis.	Pamplemousses.	R. du Rempart.	Flacq.	Grand Port.	Savanne.	Plaines Wilhems.	Black River.	Moka.	
January ...	1	...	2	...	...	...	2	...	1	6
February...	1	...	2	...	1	...	7	...	...	11
March ...	1	...	4	1	2	1	4	...	1	14
April ...	...	...	5	...	...	...	5	...	...	10
May ...	...	...	4	3	1	...	2	...	...	10
June ...	2	...	1	1	...	...	1	...	...	5
July ...	...	...	4	3	2	...	2	...	2	13
August ...	2	...	5	...	1	1	...	...	1	10
September.	2	...	2	2	1	...	5	...	2	14
October ...	2	...	2	...	...	1	3	...	5	13
November..	1	...	3	...	1	...	12	1	1	19
December...	1	...	2	...	4	...	11	1	1	20
Total...	13	...	36	10	13	3	54	2	14	145

On comparing this Table with that printed in the report of the preceding year, an increase of 64 cases, *i.e.*, about 80 o/o in the incidence of the complaint, will be observed. It would be rash however to conclude that the disease is fast spreading throughout the Colony as in all likelihood the increase is more apparent than real, and is due to a better classification of the existing fevers through the greater facilities now afforded for their differentiation by the opening of the Bacteriological Laboratory, as the comparison in the monthly totals of cases clearly shows. The increase for the first half of the year had been 7, while for the second half it was 57.

The more frequent occurrence of the disease has been specially brought to notice in the districts of Port Louis, Rivière du Rempart, Flacq and Grand Port. Savanne, it is interesting, shows a marked decrease.

It will not be possible however to establish the real facts until more extended observations have been made at the Bacteriological Laboratory, and the fever cases among the ignorant classes come more under the notice of medical practitioners.

Diphtheria.—Cases of this disease were notified 60 times in 1907 against 33 in 1906, giving therefore an apparent increase of about 100 o/o. The admissions into the Hospitals for the same complaint numbered 5 ; in three of these there was a fatal issue.

The following Table shows the monthly incidence of the cases as well as the distribution of the disease in the different districts of the Colony :—

Months.	Districts									Total.
	Port Louis.	Pamplemousses.	Riv. du Rempart.	Flacq.	Grand Port.	Savanne.	Plaines Wilhems.	Black River.	Moka.	
January ...	...	...	...	...	...	...	8	...	...	8
February...	2	...	...	...	...	...	5	...	1	8
March ...	...	...	...	...	...	1	2	...	...	3
April ...	...	...	...	...	...	...	1	...	...	1
May ...	...	...	...	...	...	...	...	...	1	1
June ...	...	...	...	...	...	...	1	...	...	1
July ...	...	...	...	...	...	...	3	...	1	4
August ...	2	...	...	...	...	...	2	...	...	4
September.	1	...	1	1	...	...	...	...	1	4
October ...	1	...	...	...	..	...	4	...	...	5
November..	...	...	...	...	...	...	5	...	1	6
December..	1	...	...	1	1	...	2	...	10	15
Total ...	7	...	1	2	1	1	33	...	15	60

Comparison of this Table with that of the previous year at once brings out the influence that the Bacteriological Laboratory has had in establishing the presence or absence of the Klebs-Löffler bacillus in cases of sore throat that came under medical notice. It will suffice to draw attention to the fact that nearly two-thirds of the cases notified were registered in the second half of the year ; no less than 15 occurred in December of which 10 in the district of Moka alone.

Six deaths occurred among the 60 cases while in the previous year the number of deaths had been 7 out of a total of 33 cases.

As usual, when the anti-diphtheritic serum was injected sufficiently early, a rapid cure was obtained.

Influenza :—Gave rise to 1,264 admissions against 1,768 in 1906 when there occurred a severe epidemic of the disease.

Pneumonia :—As might have been expected from the remarks regarding Influenza, 411 admissions took place on account of Pneumonia during the year under review against 489 in 1906, giving therefore a reduction of 78. The case-mortality, 36.9 o/o is however higher than that of the previous year by 1.4. The greater lethality may be accounted for by the fact that in a number of cases the complaint was a sequel of measles.

Beri-Beri :—65 cases of that disease were treated in the different hospitals of the Colony during the year under review, 62 being new admissions, while 3 were patients still under treatment in the wards of the Civil Hospital at the beginning of the year 1907.

These admissions, on comparison with those of 1906, show an increase of 52.

The following statement gives the number of cases treated in the several hospitals of the Colony in 1905, 1906 and 1907 :—

Hospitals.	Number of cases treated.		
	1905.	1906.	1907.
Port Louis, Civil Hospital	20	10	25
Port Louis <i>Prisons</i> „	24
Pamplemousses „
Rivière du Rempart „
Flacq „
Flacq <i>Prisons</i> Hospital	2
Grand Port ... „
Savanne „
Savanne <i>Prisons</i> Hospital...
Barkly Asylum „	1
Lunatic Asylum „	1
Beau Bassin <i>Prisons</i> „	12
Reformatory Hospital
Moka
Total ...	20	10	65

This Table shows at a glance that the disease is not endemic in the Island, the cases treated at the Civil Hospital, Port-Louis, as already observed in previous reports, belonging to the newly arrived immigrant Chinese or to the Shipping population.

The outbreak on the present occasion is interesting from the aetiological point of view.

Apart from the ordinary class of cases treated at the Civil Hospital, a few of the patients during this year came from the Prisons or from Six Islands where an outbreak occurred for the first time.

The sporadic cases at the Lunatic Asylum and at the Barkly Asylum were the only ones met with among the general population, the first case is referred to in Dr. Paddle's report, and the other occurred in a debilitated patient, a vagrant, recently admitted for malarial cachexia.

The outbreak was recognized in February and almost simultaneously in three out of the four prisons, only prisoners who had been detained over six weeks being affected.

In Savanne Prisons where at the time there were no prisoners who had been confined over six weeks, no Beri-Beri was detected.

At Flacq Prisons, 100 prisoners were detained at the time of the outbreak, only 4 of these had been in jail over 6 weeks, and of them 2 developed the disease.

This fact apparently pointed to a common agency requiring some time to produce its effects.

The possibility of infection from human intercourse and transmission of disease by insects or by fomites was carefully enquired into and had to be abandoned.

The disease in the two principal jails occurred in different blocks, in cells at some distance from one another, while in the case of Flacq, there had been no communication at all between the inmates and their fellows of the other jails.

No suspicious sickness of the same nature had been observed in any of the jails or in the general population for many years past. The last epidemic of Beri-Beri, or Acute Anæmic Dropsy, came to an end, after lasting three or four years, in the early eighties.

Other possibilities were likewise examined and the only theory which apparently satisfactorily explained the outbreak was the alimentary one.

The various constituents of the prisons dietary were considered and it was ascertained that the only change made of late in this respect had been as regards the kind of rice supplied to the prisoners.

The rice generally consumed in the Colony is Indian rice, this article having, for various reasons, considerably increased in price, rice from other countries had to be imported towards the end of 1906. As a consequence, the prisoners were supplied in December 1906 with another quality of rice from the East, apparently a decorticated unstoved white one (uncured) and, in the early days of February, obscure symptoms affecting the muscular and nervous systems were observed among a number of prisoners.

The disease was insidious in its onset and of varying intensity. Several of the patients however presented after a time well marked evidence of the different types of Beri-Beri, some of the cases running into the dropsical stage, one ending fatally 73 days after admission to hospital, while in two cases death supervened very rapidly—a healthy strong looking man, who was at work the day previous without having complained of any sickness, being carried off from heart failure within 24 hours of admission.

The autopsies in the fatal cases left no doubt as to the real nature of the disease.

Whether Beri-Beri is a morbid entity *per se*, or whether under the name are in fact included a number of diseases due to different causes, it is beyond the province of this report to discuss; but, in this instance, the Beri-Beri met with in the Island in 1907 was clearly a neuritis due to something connected with a particular rice diet. The fact that the same article was used by a large population without apparently any untoward effect only proves that a combination of circumstances may influence differently the agency at work, but does not impair the view that the rice incriminated, forming the fundamental constituent of the prisons dietary, was the cause of the outbreak. This opinion is supported more-

over by other facts. A change of diet to bread at first, and to ordinary red Indian rice (cured) later on, at once brought on a cessation of the disease in the prisons. At Six Islands Beri-Beri broke out in January among the people after the same kind of rice as had been given to the prisoners had been supplied to that Dependency of Mauritius at the end of 1906.

Without going into further details beyond the scope of this report, I would say in conclusion that the outbreak referred to can only be fully and satisfactorily explained by Dr. Braddon's theory of uncured rice to which besides it gives further support.

Nephritis.—426 patients were admitted for that complaint. This figure shows a considerable increase, 141, over the number 285, recorded in 1906. The reasons for the prevalence of the disease have been discussed in other reports; but no definite and satisfactory explanation can as yet be suggested. This question which is a serious one calls for further and careful investigation. It is satisfactory however to record that the case-mortality which had been 21·5 in 1905 and 22·4 o/o in 1906 was only 19·2 during the year under review.

Measles.—One case had been recorded in one of the Districts in May, but the Colony had apparently remained free from the disease when in August six cases were notified. It is not clear when or how the disease was introduced; the complaint having existed in various countries in frequent communications with Port Louis, it can be easily understood, given the length of the incubation period, how it could easily have gained access to this town. Further inquiries brought out the fact that in July suspicious cases of a very mild eruptive fever had for some time been observed both in town and in the country districts in which no definite diagnosis could be made, the eruption in some cases lasting only 24 hours at most. The disease rapidly spread in spite of the precautions adopted in the first recognized and notified cases, and from August to December 347 cases were notified to the Sanitary Authorities, the figures apparently being far below the actual number of cases.

The type of the affection varied very much as the disease progressed, severe cases being observed alongside very mild ones, not a few still being so atypical that in certain cases the patients were pursuing their usual occupations until otherwise advised by medical men. On the other hand, severe complications were not infrequent when proper precautions had been neglected. Thirty-five of the notified cases proved fatal.

Scarlet Fever.—Four cases occurred, they were observed in different months of the year and at different places. The source of infection could not be ascertained; but there had been no communication between the patients, and the infection did not spread from any of them.

The clinical features of the disease were those of scarlet fever, but the real nature of this affection was subsequently the subject of a lengthy discussion at the " Société Médicale ", and it is evident that the profession is divided on the question of the existence or otherwise of true scarlet fever in the Colony.

Diabetes.—58 cases were admitted into hospital against 57 in the past year.

Syphilis.—This disorder gave rise to 463 admissions, showing an increase of 30 over the number recorded during

1906. A glance at the figures given below will show that the disease is unfortunately gaining ground in this Colony :—

Years.	Number of admissions for Syphilis.
1904	352
1905	359
1906	433
1907	463

Leprosy :—The number of cases of that complaint, 20, treated temporarily in the hospitals was the same as last year. The number of pauper lepers maintained at the St. Lazare Asylum during the year under review amounted to 210 of whom 168 were males and the remainder females. A return kindly placed at the disposal of this Department by the Poor Law Commissioner shows that the number of inmates discharged during 1907 was 58 and that the deaths totalled 25. At the close of the year 127 lepers were still remaining under treatment in that Institution.

Plague :—Twenty admissions, against 30 in the previous year, took place in the general hospitals. Eighteen of these cases were reported from among the patients admitted into the Civil Hospital, one from Barkly Asylum and one from Moka Hospital.

The total number of cases of plague detected in the Colony during the year under review was 224, the lowest since the outbreak of plague in the Island as will be seen from the remarks made in Chapter IV.

Mental Diseases :—75 patients were temporarily admitted into the general hospitals on account of mental disorder. The number shows an increase of 9 over that of the previous year.

There were 435 patients including one male patient under observation on the roll of the Lunatic Asylum on the 31st. December 1907; the classification of the cases is given in the annexed report of the Superintendent of that Institution.

The total Asylum population gave a daily average of 258.35 males and 172.49 females for the year, which shows an increase of 11.52 on the average for 1907.

The total number of certified lunatics in the Colony at the end of last year, including the patients in the Lunatic Branch Wards of the Barkly Asylum and those out on probation, was 598, giving one insane in every 629 persons in the Island at that date.

Pertussis.—The epidemic referred to in 1906 came to an end during that year, and only one case came under notice during the period covered by this report.

III. — METEOROLOGICAL CONDITIONS OF THE SEASONS AND THEIR PROBABLE EFFECTS WITH REGARD TO SICKNESS.

Repetition of the remarks made in previous annual reports is inevitable in the consideration of the effects of meteorological conditions on the health of the Colony.

The Director of the Royal Alfred Observatory has kindly supplied a statement of the temperature, rainfall, humidity and wind velocity for each of the months of the year, which is appended to this report as Annexure I (b).

The total rainfall for the year stands at 44.45 inches against 41.66 for 1906 and an average of 48.95 for 37 years; but it has not been distributed as usual. For instance, January and February show a considerable decrease from the average. In April, on the other hand, the amount fallen has been nearly double the average of the corresponding month of the last 37 years. Then followed a period of drought which extended from July to November. In December, against what usually holds, rain fell abundantly, being three times the average for 37 years.

The degree of humidity concurrently has, on the whole ranged lower than in 1906 except during the months of April, May, June, November and December when the excess was comparatively high.

The mean temperature for the year is exactly the same as that for 1906; but on closer consideration, it is seen that the monthly means have, with the exception of June, when the increase was 1°, been markedly lower during the first eight months, while during the last four they have been markedly higher.

The range of temperature for the year stands at 23.8 against 26.6 for 1906; but in May, August, September and October, the variations of temperature have been greater than during the same months of the preceding year.

Referring now to Chart I for malaria, it will be seen that the number of cases rose steadily from February to April and then rapidly diminished to reach a minimum in September.

This curve runs practically parallel with that for the rainfall the influence of which has been so often demonstrated that it is not necessary to again lay stress on the correlation which exists. But contrary to what should have been expected, no further increase has followed the high rainfall of April. This can apparently be explained partly by the fall in temperature which was coincidentally established, and the higher wind velocity which ruled during April and May.

Again, the influence of climatic conditions on the production of dysentery is clearly demonstrated by Chart II to which further weight is added by the consideration of the conditions which have been enumerated above. Indeed, with the advent of rain in the early months of the year during which the fields are manured, a considerable amount of organic matter is washed to the rivers which, up to the present, constitute the only water supply of the greater number of the inhabitants. But the condition is made still worse when there happens to be a very high rainfall which sweeps in addition the more or less decomposing organic matter which have accumulated along the banks of the rivers.

These factors, usually at work in the early months of the year, cease to ply their unfortunate influence once the rivers and streams have been washed so to speak; but in 1907, owing to the severe drought which set in, the water in the rivers ran so low that in some places it practically remained stagnant and allowed of the fermentation and decomposition of the leaves and fruits which fell into the beds of the rivers from the trees in the reserves. Hence dysentery and the diarrhoeic diseases continued to run high during the latter months of the year against what usually holds, the curve representing practically a plateau.

Annexure X.

The danger from bambous plantations near rivers may in this connection be referred to also, and the remarks on the sub-

ject, in the annexed report of the Government Analyst deserve consideration.

The curve of admissions for Brouchitis—Chart IV—shows a very irregular course, and here again the probable influence of meteorological conditions may be seen. The rise from January to February is associated with a wide range of temperature which has besides, on the whole, been lower than usual.

In April, when an exacerbation in the disease incidence takes place, there is in addition to a wide range of temperature, a heavy rainfall, a great increase in humidity and a high wind velocity. Again, for August and October, the wave shows two apices associated with wide ranges of temperature which moreover remains low with a high wind.

IV.—RECURRENCE OF PARTICULAR DISEASES.

Malaria :—The remarks already made as to the tendency of the malaria epidemic to recur every other year with greater virulence are borne out by the figures for 1907. The admissions for that complaint during that year were 4,272 against 3,674 the year previous ; but were however less than those for 1905 which reached 5,123. The alternance in this respect will be made more manifest by reproduction of the tabular statement taken from the last annual report :—

Years.	1899	1900	1901	1902	1903	1904	1905	1906	1907
No. of cases	4,152	2,848	4,182	3,360	4,788	3,039	5,123	3,674	4,272

Chart I indicates the monthly number of admissions for malaria and the rainfall during the corresponding periods. The well established correlation between the latter and the prevalence of the disease clearly results from the comparison as stated in the foregoing chapter.

The outbreak of fever at Phoenix, referred to in the last report, proved of much lesser intensity after the works undertaken for the drainage of the locality and the liberal distribution of quinine to the residents.

The Colony having had the great advantage of a visit from Professor Ross, who arrived in Mauritius in November last to investigate into the causes of Malaria, and a report from the eminent expert being shortly expected, it will be evident that further comments on this subject in this report are unnecessary.

Dysentery.—The part played by water in the causation of this disease has been referred to in previous reports. The action of heavy rains in washing down to the rivers and water courses of the Island the fertilizers from the cane-fields through which the streams run has been reviewed in the last chapter, and was apparent in the first part of the year, as may be seen by reference to Chart II which shows the monthly number of cases of dysentery and the monthly rainfall in 1907.

The highest number of cases of the disease recorded in the first half year occurred in May while the highest rainfall recorded had been in April.

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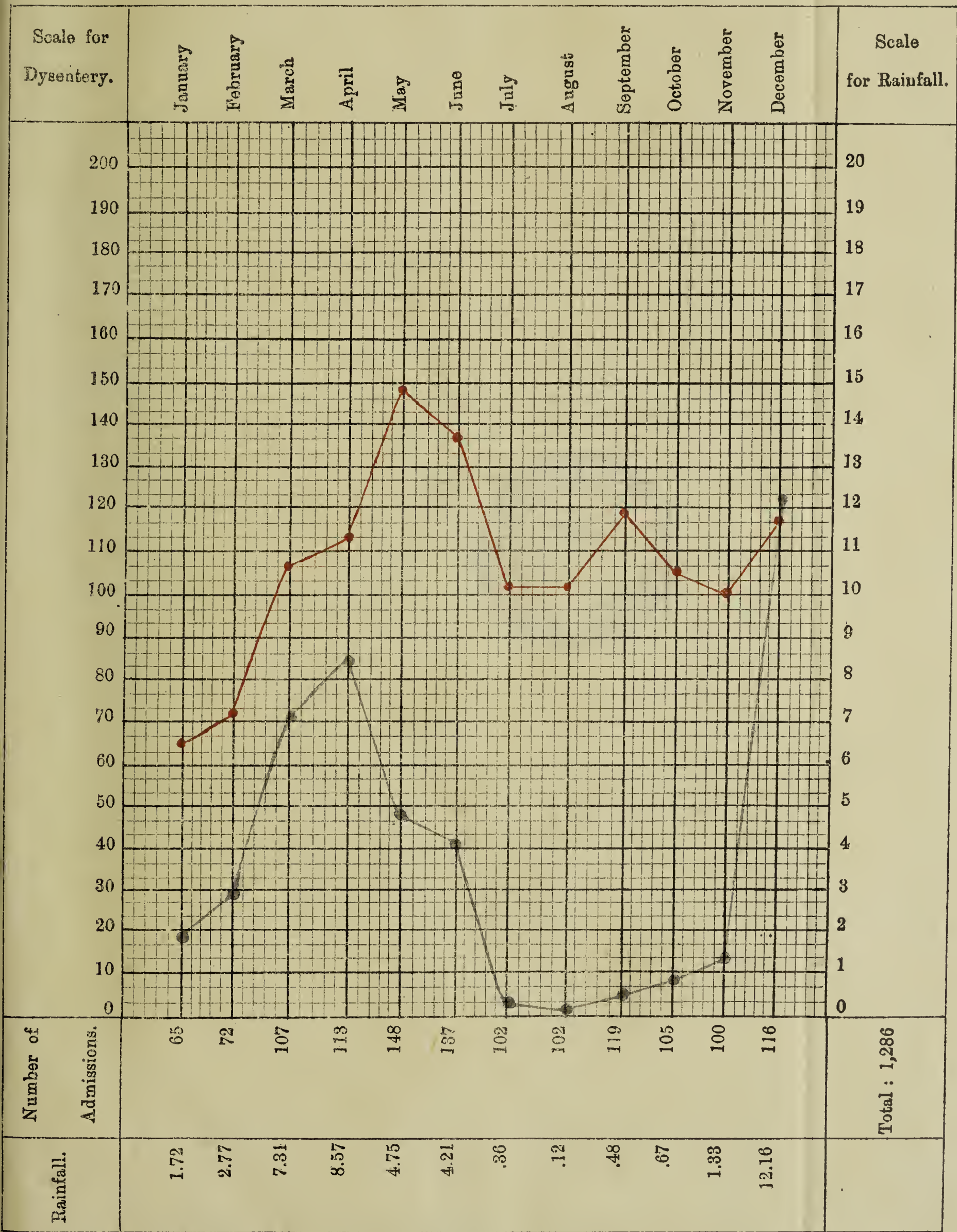
during 1907.





CHART II

Chart showing monthly admissions for DYSENTERY and monthly Rainfall during 1907.



Dysentery=

Rainfall =

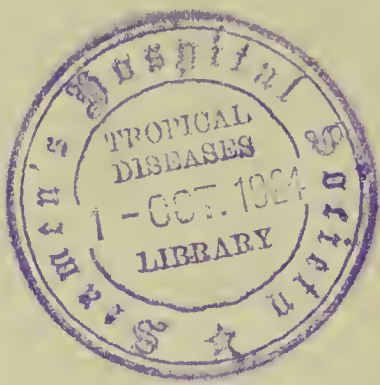


CHART III

Chart showing monthly number of admissions for TUBERCULOSIS
during 1907.

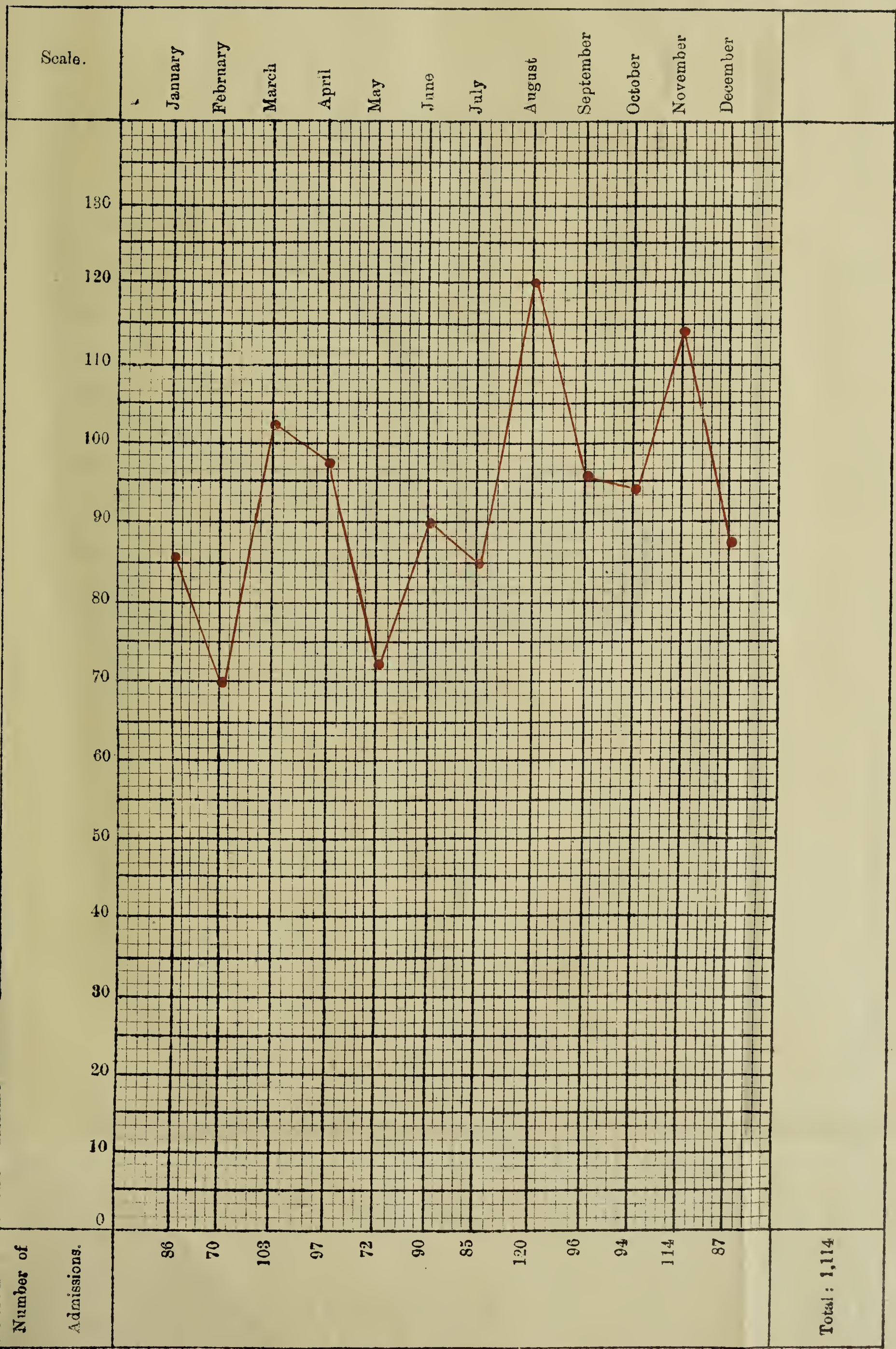
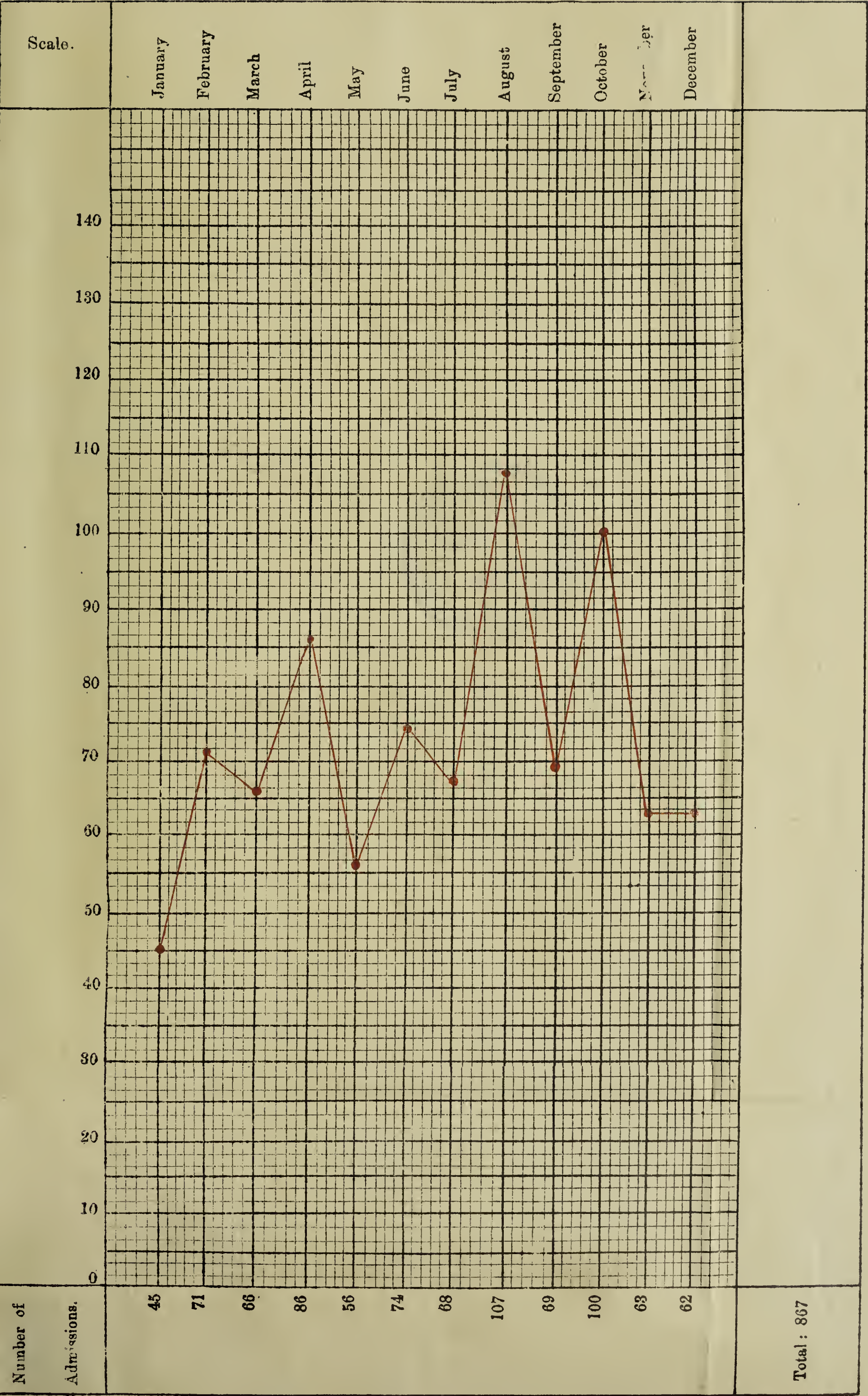




CHART IV

Chart showing monthly admissions for BRONCHITIS
during 1907.





The persistence of the large incidence of these cases in the second half of the year and the rise in September would appear to result from the same factor, viz : water, though owing to a different agency.

The quality of water was evidently bad during the prolonged drought which was experienced from July to November. This can be easily understood when it is remembered that, as previously stated, the rivers from which the greater number derive their water supply, continued besides to serve for bathing and washing purposes during that time, and that these conditions were in certain localities aggravated by the unavoidable pollution from sugar factories.

These views are moreover borne out by an inspection of the returns of the institutions in which the inmates use Mare-aux-Vacoas water only. Thus at the Barkly Asylum the monthly number of cases of dysentery was as follows among the 100 inmates of the Lunatic Branch Wards :—

January	...	...	...	...	0
February	...	...	...	...	0
March	...	...	...	...	0
April	...	...	...	...	1
May	...	...	...	...	2
June	...	...	...	...	0
July	...	...	...	...	0
August	...	...	...	...	2
September	...	...	...	...	1
October	...	...	...	...	2
November	...	...	...	...	2
December	...	...	...	...	2

Tuberculosis.—This year again, as may be seen from Chart III, the worst periods for the incidence of Tuberculosis have been March and April and July to September with a maximum in August and a subsequent one in November. These maxima coincided with or followed upon the well marked variations in temperature and wind velocity which characterized the climatic conditions in July, August and October.

Bronchitis.—Chart IV gives the curve of the disease in 1907. The greater incidence of the disease followed on the wet weather of April and the prevalence of windy weather which aggravated the wide ranges of temperature already noticed.

Plague.—The 1906 epidemic terminated at the end of February 1907, the outbreak having been prolonged by a rather serious incidence of the disease in the district of Plaines Wilhems where 17 out of 40 cases occurred in January and 25 out of 28 in February.

In the first month of the year one case of plague was detected at Moka and in February one case occurred at Black River and another at Moka. None of these cases however were indigenous to these localities.

There were 3 cases in Plaines Wilhems in March, 4 in April and 1 in May, while in Port Louis only 1 case occurred in April. The Plague outbreak of 1907 began in June when 3 cases were observed in town, they were followed by 2 in July and 5 in August. In September 25 cases were detected in Port Louis, 4 at Plaines Wilhems and a case imported from town, the only one during the outbreak, at Rose Belle in Grand Port. The disease then followed the usual ascending curve, 49 cases occurring in October of which 9 at Plaines Wilhems and 5 at Pamplémousses

where a small outbreak which was however rapidly mastered within the next month, took place at Mauricia.

In November, the disease began to abate, 42 cases, the greater number of which still occurred in Port Louis, being detected, while during the next month only 16 cases were recorded. Of these, 4 took place at Savanne on St. Félix Sugar Estate where energetic measures rapidly stamped it out, and 4 others in various parts of Moka. The outlook in the latter district was threatening as considerable mortality occurred among rats at *l'Agrément*. It is satisfactory to note that no cases occurred among human beings. The Bacteriological Laboratory had occasion to examine several rodents from the locality and will probably refer to the scientific aspect of this epizootic.

Statement III gives as usual the monthly number of cases in the different districts of the Colony. It will be observed that the total number of cases 224 is the smallest which has been recorded in the Colony since the visitation of Plague in 1899.

For the sake of comparison Annexure IV has been attached, giving the plague incidence and mortality during the epidemic and the quiescent stages of the disease since 1899.

The usual measures described in previous reports to combat the disease have unremittently been applied.

In the course of the year 80,826 rats had been caught or poisoned in Port Louis and 44,732 in the country districts, giving a total of 125,558 rodents destroyed by the Sanitary Department alone.

The daily examination of a number of rats trapped or found dead was carefully carried out and the naked eye appearances of the carcasses as well as the microscopical results afforded a valuable means of ascertaining where the infection was lurking.

Where the preventive measures did not prove quite successful from various causes in averting attacks among the people, the antecedent infection among rats fully established once more the correlation which exists between the rat epizootic and the incidence of Plague on men.

During the year there were 63 admissions at Bois Savon Lazaret. The Plaines Wilhems one was opened in November and up to the 31st. December received 12 patients under the care of Dr. Castel who continued to combat the disease in Plaines Wilhems with the same energy as in past years.

It is to be hoped that Dr. Blackburn, Plague Authority, to whose untiring efforts I am again desirous of bearing testimony will be able to deal with the various questions of detail in a special report on the subject.

Surra —This disease has continued throughout the year, but with a lesser virulence than formerly.

V.—VACCINATION.

The Public Vaccinators issued 10,381 certificates of successful vaccination and 74 certificates of insusceptibility during the course of 1907. In 59 cases, the result of vaccination could not be ascertained owing to the children not being brought back for the usual inspection in the week following the operation.

The number of children presented at the different vaccine stations had only been 9,767 in 1906. The increase of vaccination during the year under review is consequent on the greater number of births already referred to in Chapter I. The proportion however of children vaccinated by the Government officials

as compared with the number of births during the year, which was 77.9 o/o in 1906 has this year been slightly less. Whether a larger number of children actually escaped vaccination altogether is doubtful as the variation in the proportion is so slight; their number in any case can in reality be but very small for the reasons stated in the last report.

The percentage of successful vaccinations was 98.7 o/o of the vaccinated children and the proportion would rise to 99.3 if the 59 cases in which the results could not be ascertained were deducted from the number.

In addition to the vaccination of infants, the crew and passengers of one vessel coming from a port where small-pox existed at the time of departure were ordered to be vaccinated previous to being allowed to land, an exception being made only as regards those who established that they had been successfully vaccinated within the past five years. The result in these cases could not be ascertained for reasons easily conceived.

VI.—SANITARY ADMINISTRATION.

In Annexure V will be found a "résumé", drawn up by the Acting Assistant Director and Chief Sanitary Officer, of the work to be reviewed under this heading.

In Annexure VI will be found the report of the Sanitary Engineer concerning the work done in his branch and under his supervision.

VII.—HOSPITALS, ASYLUMS & DISPENSARIES.

The number of Hospitals and Asylums has been the same during the year under review as that reported last year, i.e., 14 including the five attached to the different jails of the Colony.

The usual statistical information concerning the admissions, deaths, cases treated as well as the hospital population at the beginning and at the end of the year, will be found in the following Table :—

Institutions.	Remaining at end of 1906.	Ad- missions.	Deaths.	Total number of cases treated.	Remaining at end of 1907.
Civil Hospital ...	125	6,230	423	6,355	180
Port Louis Prisons Hospital. ...	12	997	2	1,009	22
Long Mountain Hospital ...	10	840	74	850	22
Poudre d'Or Hospital ...	28	1,417	49	1,445	32
Flacq Hospital ...	25	2,227	114	2,252	40
Flacq Prisons Hospital ...	9	143	4	152	1
Mahebourg Hospital ...	39	3,030	140	3,069	39
Savanne Hospital ...	19	1,291	71	1,310	21
Savanne Prisons Hospital ...	6	254	1	260	4
Barkly Asylum Hospital ..	84	3,856	275	3,940	176
Lunatic Asylum Hospital ...	24	466	23	490	14
Beau Bassin Prisons Hospital ...	18	1,375	34	1,393	29
Reformatory Hospital ...	...	116	1	116	4
Moka Hospital ...	5	1,113	58	1,118	24
Total ...	404	23,355	1,269	23,759	608

No change has taken place in the number of Dispensaries of which there are 14 permanent and 14 extra. The total number of cases treated in these Institutions, inclusive of the Reformatory out-patients, amounted to 55,635 while the number of minor operations performed have been 1,435. These figures are lower than those of the previous year when 56,354 cases were treated and 1,572 operations were recorded.

In consequence of the fever epidemic at Phoenix, a Dispenser was specially appointed for the purpose of visiting the poor of the locality at home and issuing quinine and simple medicines to the sick. 3,916 domiciliary visits were made in this connection from the 26th. of January when the measure above referred to was started to the 29th. of September when the epidemic of the year had subsided.

VIII.—MISCELLANEOUS.

Port and Quarantine Work :—232 vessels were boarded by the Health Officer during the year covered by this report. Of these, 196 were offered pratique at once, but 23 refused the same and performed their landing and coaling operations in self-imposed quarantine between the forts.

Of the 36 vessels placed in quarantine by the Health Officer, 29 were subjected to that measure for purposes of simple disinfection, while the remaining 7, besides being disinfected, were detained to complete a period of quarantine as they were coming from infected ports within the incubation periods of the diseases for which that measure was imposed.

In one case, as stated, vaccination was moreover imposed on the crew and passengers of a steamer on account of the prevalence of small-pox at its port of departure.

The Harbour Disinfecting Station was availed of for the disinfection of passengers' luggage seven times in the case of incoming vessels and twelve times in that of out-going ones.

Cannoniers' Point Quarantine Station was occupied twice during the year under review. On the first occasion it was utilized for the observation of the passengers ex S.S. "Surada" on board of which small-pox had occurred during the voyage. The quarantine in this case lasted three days only. On the second occasion, the station was employed from the 20th. of May to the 8th. of June in the case of the coolies introduced by the S.S. "Fultala" for the purpose of disinfection and the isolation of cases of measles, and subsequently for the routine measures generally carried out at the Depot before the distribution of the labourers to the estates for which they were indentured.

Anti-Malarial Campaign :—The Council of Government voted Rs. 10,000 to continue the works for the prevention of malaria during the financial year 1907-08.

The draining of the numerous marshes at Clairfond, Phoenix, where a severe epidemic of malaria had broken out at the end of 1906, was the main feature of the anti-malarial campaign in 1907.

Extensive works consisting in the deepening and banking up of canals, the draining of pools and puddles in the locality were undertaken with the result that numerous mosquito-breeding places at Clairfond and its vicinity, had been considerably reduced at the end of the year.

At Mon Plaisir, Pamplémousses, the works referred to in the last report were continued and trenches were dug across the

ground which had been drained during the year so as to complete the drying up of the large marsh.

On the recommendation of the Malaria Committee, small sums were placed at the disposal of the Curepipe Board for sanitary works at Mare Lagesse where satisfactory results have been obtained.

With the funds provided under item "Minor Sanitary Works" the following works were attended to :—

- (a) All the Curepipe rivers were cleaned during the year.
 - (b) At Phoenix part of river du Mesnil was cleaned, its banks were regulated and cleared of vegetation, &c.
 - (c) The bed and banks of River Céré along its course thro' Centre de Flacq village were cleaned throughout.
 - (d) Belle Isle River at Bambous, Black River, was cleaned on a length of about $1\frac{1}{2}$ mile.
 - (e) The cleaning of part of other rivers was also carried out.
- The distribution of quinine in malarious localities was carried out on the same lines as in the previous year.

Laboratory Works :—Dr. Lafont having arrived in Mauritius in July 1907, a Bacteriological Laboratory was started in the buildings at La Malmaison, St. Pierre, pending the completion of the permanent buildings which are being erected for the purpose at Réduit. The plant which had been in use at the Civil Hospital was transferred to the new Institution where it was supplemented by new apparatus specially selected by the Director during his stay in Europe.

The report of the Laboratory will describe the work done therein under Dr. Lafont's management.

A summary of the chemical work done by the Government Analyst will be found in Annexure X.

Legislation :—The following laws and regulations affecting the Medical and Health Department were passed during the year under review :—

Ordinance No. 22 of 1907 which, besides being a consolidating Ordinance codifying the previously existing laws on the subject of vaccination, has provided for revaccination, as soon as circumstances will permit this additional prophylactic measure being carried into practice.

Regulations Nos. 115, 191, 201 and 211 have for their main object the prevention of the pollution of supplies of drinking water through the washing of clothes over a certain distance above their intake.

Government Notice No. 121 extended the application of the Surra Regulations to the whole Island when the disease was detected in the Southern part of Black River.

Regulations No. 198 were framed to enable the Sanitary Authorities to deal more effectively with questions connected with the conservancy of populous localities and the establishment and working of noxious factories.

Departmental :—Dr. Rouget having returned from leave in March, resumed his duties at the Civil Hospital which, during his absence of 13 months, had been under the care of Dr. de Chazal. It is a pleasant duty for me to place on record my appreciation of the services rendered on that occasion by that medical gentleman and of his successful management of that Institution.

Dr. Barbeau, the Assistant Director, having proceeded to Europe on leave of absence at the end of March, Dr. Momplé was appointed to act for him and Dr. Milne took charge of the Northern group of districts while Dr. Masson was appointed Acting 2nd. Sanitary Warden. The vacancy in the post of Assistant Government Medical Officer in Port Louis was filled up by Dr. Crétin until the 22nd. September when Dr. Lincoln took over the duties, being himself replaced as Health Officer by Dr. Gentil. In June 1907, Dr. Dubois, Government Medical Officer of Savanne, having retired from the service, Dr. Sinnatambou, Assistant Medical Superintendent of the Civil Hospital, was appointed to that post and Dr. Sauzier succeeded him at the Civil Hospital.

Dr. Roussel, Dispensary Medical Officer of Port Louis, having died in August, Dr. de Boucherville, the then Acting Government Medical officer of Pamplémousses, was promoted to the vacancy and Dr. Crétin appointed provisionally to the medical charge of the district of Pamplémousses.

H. LORANS,

25th. May, 1908.

M.B.C.M., D.P.H., EDIN.

Director, Medical & Health Department.

ANNEXURE I.

(a)

RETURN OF THE STATISTICS OF POPULATION FOR THE YEAR 1907.

					Europeans, Whites, Mixed & Coloured.	Africans.	Indians.	Chinese.	Total.
Number of inhabitants on 31.12.06	...				104,884	2,376	262,572	5,568	375,400
„ Births during the year 1907	...				3,993	...	10,193	...	14,186
„ Deaths „ „ 1907	...				3,760	38	9,123	116	13,037
„ Immigrants „ 1907	...				1,718	...	2,040	506	4,264
„ Emigrants „ 1907	...				1,775	...	1,699	704	4,178
Number of inhabitants on 31.12.07	...				105,060	2,338	263,983	5,254	376,635
Increase or ... ..	...	...	...	...	176	...	1,411	...	1,235
Decrease ... ..	...	...	...	...	...	38	...	314	...

(b)

METEOROLOGICAL RETURN FOR THE YEAR 1907.

MONTHS.	TEMPERATURE.						RAIN- FALL.	Degree of Humidity.	WINDS.		REMARKS.
	Solar Maximum.	Minimum on Grass.	Shade Maximum.	Shade Minimum.	Range.	Mean.	Amount in Inches.		General Direction.	Average. Force.	
	°	°	°	°	°	°	Ins.	%		Miles. per hour.	
January ...	153.0	60.4	88.6	66.0	22.6	76.6	1.72	72	E.	7.8	Temp. and Rainfall much below average.
February	151.2	61.4	88.1	67.1	21.0	77.9	2.77	76	E. by S.	8.5	Temp. slightly and rainfall much below average.
March ...	155.3	62.7	86.5	67.3	19.2	77.1	7.31	80	E. by S.	6.8	Rainf., temp. and humidity much above average.
April ...	144.3	55.0	84.2	62.2	22.0	75.3	8.57	80	E. by S.	9.1	Rainfall much above average.
May ...	145.9	46.5	81.7	54.5	27.2	71.5	4.75	77	E. S. E.	8.8	Temp. and humidity slightly below average.
June ...	138.0	49.0	77.3	56.1	21.2	68.5	4.21	80	E. S. E.	9.2	Pressure much below, humidity much above average.
July ...	135.9	46.0	76.9	55.0	21.9	67.0	0.36	73	S. E.	10.9	Rainf. much below average.
August ...	141.8	40.0	77.3	49.9	27.4	66.4	0.12	68	S.E.by E.	9.9	Rainf., temp. and humidity much below average.
September	146.1	46.0	81.8	55.5	26.3	68.9	0.48	68	S.E.by E.	9.5	Temp. & Rainf. below, humidity much below average.
October ...	148.1	47.2	87.8	57.2	30.6	72.7	0.67	68	E. by S.	10.2	Rainf. & humidity below normal: temp. slightly above.
November	150.2	59.1	89.0	63.7	25.3	76.5	1.33	70	E.	8.6	Temp. much above, humidity slightly above average.
December	151.6	64.3	90.3	69.2	21.1	78.7	12.16	78	E. by N.	7.7	Rainfall and humidity much above average.
	146.8	53.1	84.1	60.3	23.8	73.1	44.45	74	E. S. E.	9.0	

ANNEXURE II.

ANNUAL RETURN

OF

DISEASES AND DEATHS, &c.,

DURING THE YEAR 1907.

HOSPITALS :—

1. Civil Hospital.
 2. Port Louis Prisons Hospital.
 3. Long Mountain „
 4. Poudre d'Or „
 5. Flacq „
 6. Flacq Prisons „
 7. Mahebourg „
 8. Savanne „
 9. Savanne Prisons „
 10. Barkly Asylum „
 11. Lunatic Asylum „
 12. Beau Bassin Prisons „
 13. Reformatory „
 14. Moka „
-

Diseases.				Remaining at end of 1906.	Yearly Total.		Total cases treated.	Remain- ing at end of 1907.	Remarks.
					Ad- missions.	Deaths.			
Small Pox	...	...	...	...	...	...	...	...
Chicken Pox	...	...	...	...	46	...	46	...	
Measles	...	...	...	...	75	8	75	5	
Scarlet Fever	...	...	...	...	...	...	...	...
Dengue	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...
Yellow Fever	...	...	...	...	...	...	...	...
Beri-Beri	...	...	...	3	62	7	65	3	
Yaws	...	...	...	...	...	...	...	...
Influenza	...	...	...	5	1,264	38	1,269	16	
Diphtheria	...	...	...	...	5	3	5	...	
Febricula	...	...	...	...	2	...	2	...	
Enteric Fever	...	...	...	...	20	6	20	2	
Dysentery	...	...	...	11	1,286	175	1,297	41	
Plague	...	...	...	...	20	9	20	...	
Malarial Fever:—									
(a) Intermittent	Quotidian	...	...	21	1,796	11	1,817	21	
	Tertian	...	...	3	336	6	339	9	
	Quartan	...	...	...	78	...	78	...	
	Irregular	...	...	2	347	1	349	3	
(b) Remittent	Type undiagnosed	...	...	3	1,453	4	1,456	17	
	...	...	...	5	237	8	242	13	
(c) Pernicious	...	...	...	...	25	16	25	...	
Erysipelas	...	...	...	2	50	10	52	2	
Pyæmia	...	...	...	...	...	...	...	...
Septicæmia	...	...	...	1	11	10	12	...	
Tetanus	...	...	...	1	5	3	6	...	
Tubercle	...	...	...	40	1,114	285	1,154	53	
Gonorrhœa	...	...	...	7	345	...	352	9	
Hydrophobia	...	...	...	...	...	...	...	...
Scurvy	...	...	...	...	3	1	3	...	
Parotitis	...	...	...	...	8	...	8	...	
Carried over				104	8,588	601	8,692	194	

Diseases.	Remaining at end of 1906.	Yearly Total.		Total cases treated.	Remain- ing at end of 1907.	Remarks.
		Ad- missions.	Deaths.			
Brought forward	104	8,588	601	8,692	194	
Pertussis	...	1	...	1	...	
Rheumatic Fever...	...	10	...	10	1	
Rheumatism	22	606	1	628	10	
Gout	...	1	1	1	...	
Leprosy :—						
(a) Tubercular	...	4	...	4	...	
(b) Anæsthetic	...	16	...	16	...	
(c) Mixed	...	...	...	...	...
Syphilis :—						
(a) Inherited	...	20	2	20	6	
(b) Primary ...	1	144	...	145	4	
(c) Secondary	3	147	...	150	3	
(d) Tertiary ...	15	152	1	167	6	
Alcoholism	...	17	1	17	...	
Delirium Tremens	...	1	...	1	...	
Anæmia	9	393	7	402	14	
Debility	15	441	62	456	15	
Diabetes Mellitus	2	58	8	60	4	
Diabetes Insipidus	...	...	...	...	...
New Growth :—						
(a) Non Malignant	1	67	...	68	1	
(b) Malignant	3	57	10	60	2	
Hæmophilia	...	2	1	2	1	
Osteo-Arthritis	...	9	...	9	...	
Starvation	...	2	...	2	...	
Senectus	1	146	28	147	8	
Other Diseases	...	2	1	2	...	
Carried over	176	10,884	724	11,060	269	

Diseases.	Remaining at end of 1906.	Yearly Total.		Total cases treated.	Remaining at end of 1907.	Remarks.
		Ad- missions.	Deaths.			
Brought forward ...	176	10,884	724	11,060	269	
DISEASES OF THE NERVOUS SYSTEM.						
Section 1 :—						
Neuritis ...	...	4	...	4	...	
Meningitis ...	...	18	13	18	1	
Myelitis ...	...	13	3	13	...	
Locomotor Ataxia ...	1	8	...	9	1	
Hydrocephalus ...	...	1	...	1	...	
Encephalitis ...	...	1	...	1	...	
Congestion of Brain ...	...	7	3	7	...	
Abscess of Brain ...	...	...	...	...	...
Cerebral Hæmorrhage ...	...	9	6	9	2	
„ Sclerosis ...	...	1	...	1	1	
„ Embolism ...	...	1	...	1	...	
Section 2 :—						
Paralysis ...	4	29	2	33	3	
Epilepsy ...	2	116	1	118	8	
Chorea ...	...	4	1	4	...	
Neuralgia ...	...	80	...	80	2	
Torticollis ...	...	3	...	3	...	
Hysteria ...	...	13	...	13	2	
Neurasthenia ...	...	17	...	17	...	
Other Diseases ...	...	26	...	26	...	
Section 3 :—						
Idiocy ...	...	21	...	21	...	
Mania ...	1	38	1	39	1	
Melancholia ...	...	1	...	1	...	
Dementia ...	...	4	...	4	...	
Delusional Insanity ...	...	2	...	2	...	
General Paralysis ...	...	9	...	9	...	
Carried over ...	184	11,310	754	11,494	290	

Diseases.				Remaining at end of 1906.	Yearly Total.		Total cases treated.	Remaining at end of 1907.	Remarks
					Ad- missions.	Deaths.			
Brought forward				184	11,310	754	11,494	290	
DISEASES OF THE EYE.									
LOCAL DISEASES	Conjunctivitis			2	74	...	76	4	
	Keratitis			3	60	...	63	1	
	Iritis			...	30	...	30	...	
	Retinitis			...	3	...	3	...	
	Cataract			4	169	...	173	6	
	Ophthalmia Tarsi...			...	29	...	29	1	
	Staphyloma			...	6	...	6	1	
	Other Diseases			...	46	...	46	...	
	DISEASES OF THE EAR.								
	Otitis			3	51	...	54	1	
LOCAL DISEASES	Necrosis			...	3	...	3	...	
	Abscess			...	7	...	7	1	
	Mastoiditis			...	6	...	6	...	
	Deafness			...	1	...	1	...	
	DISEASES OF THE NOSE.								
	Epistaxis			...	...	...	...	...
	Rhinitis			...	4	...	4	...	
	Ozoena			...	1	...	1	...	
	Polypus			...	1	...	1	...	
	DISEASES OF THE CIRCULATORY SYSTEM.								
LOCAL DISEASES	Pericarditis			...	4	3	4	...	
	Hypertrophia Cordis			...	14	...	14	...	
	Valvular diseases :—								
	(a) Aortic...			2	72	21	74	1	
	(b) Mitral...			2	114	18	116	5	
	Aneurysm			...	5	1	5	...	
	Phlebitis			...	1	...	1	...	
	Arterio Sclerosis			...	16	1	16	...	
	Other Diseases			...	15	4	15	1	
	Carried over			200	12,042	802	12,242	312	

Diseases.				Remaining at end of 1906.	Yearly Total.		Total cases treated.	Remaining at end of 1907.	Remarks.
					Ad- missions.	Deaths.			
Brought forward				200	12,042	802	12,242	312	
DISEASES OF THE RESPIRATORY SYSTEM.									
LOCAL DISEASES.	Asthma	...	...	3	176	...	179	2	
	Laryngitis	...	...	...	16	...	16	...	
	Bronchitis	...	...	9	867	27	876	16	
	Pneumonia	...	...	4	411	153	415	9	
	Pleurisy	...	...	4	49	5	53	1	
	Hæmoptysist	...	...	1	7	...	8	...	
	Empyœma	...	...	2	7	3	9	1	
	Pleural Fistula	...	...	...	1	...	1	...	
	Emphysema	...	...	...	6	...	6	...	
	Gangrene of lungs	...	...	...	1	1	1	...	
	DISEASES OF THE DIGESTIVE SYSTEM.								
	Stomatitis	...	...	1	70	1	71	2	
	Tonsillitis	...	...	...	17	...	17	...	
	Dyspepsia	...	...	...	175	...	175	1	
	Gastritis	...	...	...	51	1	51	...	
	Gastralgia	...	...	2	184	...	186	2	
	Ulcus Ventriculi...	...	...	1	2	2	3	...	
	Enteritis	...	...	1	184	18	185	3	
	Appendicitis	...	...	...	8	...	8	1	
	Hernia	...	...	1	47	1	48	2	
	Hæmorrhoids	...	...	2	82	...	84	...	
	Fistula in Ano	...	...	2	40	...	42	...	
	Hepatitis	...	...	2	74	2	76	2	
	Cirrhosis of Liver...	...	...	2	93	19	95	3	
	Suppuration of Liver	...	...	4	36	18	40	1	
	Biliary Calculus	...	...	...	4	...	4	...	
	Peritonitis	...	...	...	19	15	19	...	
	Diarrhœa	...	...	8	496	27	504	5	
	Colic ...	...	...	...	41	...	41	1	
	Constipation	...	...	...	52	...	52	...	
Carried over				249	15,258	1,095	15,507	364	

Diseases.	Remaining at end of 1906.	Yearly Total.		Total cases treated.	Remaining at end of 1907.	Remarks.
		Ad- missions.	Deaths.			
Brought forward	249	15,258	1,095	15,507	364	
DISEASES OF THE DIGESTIVE SYSTEM.— (Continued).—						
Other Diseases	1	56	8	57	2	
DISEASES OF THE LYMPHATIC SYSTEM.						
Splenitis	...	14	...	14	...	
Hypertrophica Splenis	5	816	20	821	33	
Adenitis	3	98	...	101	3	
Lymphangitis	...	34	...	34	1	
Lymphangiectasis	...	...	...	...	...
Goitre	...	1	...	1	...	
DISEASES OF THE URINARY SYSTEM.						
Nephritis	11	426	84	437	13	
Pyelitis	...	3	...	3	...	
Cystitis	1	108	2	109	1	
Calculus	...	5	...	5	...	
Other Diseases	...	38	...	38	2	
Carried over	270	16,857	1,209	17,127	419	

Diseases,				Remaining at end of 1906.	Yearly Total.		Total cases treated.	Remaining at end of 1907.	Remarks.
					Ad- missions.	Deaths.			
Brought forward				270	16,857	1,209	17,127	419	
DISEASES OF THE GENERATIVE SYSTEM.									
(a) <i>Male Organs.</i>									
Balanitis	...	...	...	...	29	...	29	3	
Phimosi	...	...	...	...	14	...	14	...	
Paraphimosis	...	...	...	2	14	...	16	...	
Stricture of Urethra	...	...	...	3	34	...	37	1	
Prostatitis	...	...	...	...	7	...	7	...	
Ulcus Veneris Molle	...	...	...	3	92	...	95	3	
Hydrocele	...	...	...	...	114	...	114	1	
Orchitis	...	...	...	2	87	...	89	2	
Other Diseases	...	...	...	1	38	...	39	1	
(b) <i>Female Organs.</i>									
Oöphoritis	...	...	...	...	3	...	3	...	
Metritis	...	...	...	...	23	...	23	1	
Parametritis	...	...	...	...	8	...	8	...	
Endometritis	...	...	...	...	6	...	6	...	
Displacement of Uterus	...	...	...	1	16	...	17	...	
Vaginitis	...	...	...	1	14	...	15	1	
Amenorrhœa	...	...	...	...	4	...	4	...	
Dysmenorrhœa	...	...	...	...	3	...	3	...	
Menorrhagia	...	...	...	...	11	...	11	1	
Metrorrhagia	...	...	...	...	10	...	10	...	
Leucorrhœa	...	...	...	...	12	...	12	...	
Mastitis	...	...	...	...	9	...	9	2	
Abscess of Breast...	...	...	...	1	22	...	23	1	
Other Diseases	...	...	...	...	12	...	12	...	
Carried over				284	17,439	1,209	17,723	436	

LOCAL DISEASES.

Diseases.	Remaining at end of 1906.	Yearly Total.		Total cases treated.	Remaining to end of 1907.	Remarks.
		Ad- missions.	Deaths.			
Brought forward ...	284	17,439	1,209	17,723	436	
AFFECTIONS CONNECTED WITH PREGNANCY.						
Abortion ...	...	14	1	14	...	
Hæmorrhage ...	...	...	...	...	...
Other affections ...	1	78	...	79	3	
AFFECTIONS CONNECTED WITH PARTURITION.						
Inertia ...	...	7	1	7	...	
Dystocia ...	...	1	...	1	...	
Post partum Hæmorrhage ...	...	...	...	...	...
Pelvic Cellulitis ...	...	...	...	...	...
Other affections ...	1	10	6	11	...	
DISEASES OF THE ORGANS OF LOCOMOTION.						
Osteitis ...	...	22	...	22	1	
Periostitis ...	...	8	...	8	...	
Caries ...	3	28	...	31	1	
Necrosis ...	2	18	1	20	2	
Synovitis ...	...	22	...	22	...	
Arthritis ...	2	38	1	40	4	
Ankylosis ...	...	9	...	9	...	
Ganglion ...	...	...	...	...	...
Other Diseases ...	1	20	...	21	2	
Carried over ...	294	17,714	1,219	18,008	449	

LOCAL DISEASES.

Diseases.				Remaining at end of 1906.	Yearly Total.		Total cases treated.	Remaining at end of 1907.	Remarks.
					Ad- missions.	Deaths.			
Brought forward				294	17,714	1,219	18,008	449	
DISEASES OF THE CELLULAR TISSUE :—									
Cellulitis & Abscess	...	...	...	28	795	13	823	34	
Gangrene	...	...	...	1	31	6	32	2	
Sinus...	...	...	...	...	6	...	6	2	
DISEASES OF THE SKIN.									
Erythema	...	...	...	...	1	...	1	...	
Eczema	...	...	...	5	193	...	198	3	
Impetigo	...	...	...	1	102	...	103	5	
Psoriasis	...	...	...	...	8	...	8	...	
Herpes	...	...	...	...	8	...	8	...	
Zona ...	...	...	...	...	6	...	6	...	
Pemphigus	...	...	...	...	1	...	1	...	
Carbuncle	...	...	...	...	34	...	34	4	
Furunculus	...	...	...	1	35	1	36	1	
Paronychia	...	...	...	1	28	...	29	...	
Lupus	...	...	...	...	1	...	1	...	
Ulcer	...	...	...	15	461	...	476	18	
Ecthyma	...	...	...	6	115	...	121	1	
Phagedænic Ulcers	...	...	...	2	58	...	60	...	
Other Diseases	...	...	...	...	57	...	57	1	
Carried over				354	19,654	1,239	20,008	520	

LOCAL DISEASES.

Diseases.	Remaining at end of 1906.	Yearly Total.		Total cases. treated.	Remaining at end of 1907.	Remarks.
		Ad- missions.	Deaths.			
Brought forward	354	19,654	1,239	20,008	520	
INJURIES :—						
(a) General :						
Burns ...	...	13	7	13	...	
Lightning Stroke ...	...	...	...	...	...
Asphyxia ...	...	1	1	1	...	
Shock from :—						
Drowning ...	1	...	...	1	...	
Fall ...	...	1	...	1	...	
Extensive Laceration of Thigh ...	...	1	1	1	...	
(b) Local :—						
Burns & Scalds ...	1	53	5	54	1	
Bruise ...	...	283	...	283	4	
Wound ...	18	715	3	733	21	
Sprain ...	1	32	...	33	...	
Dislocation of :—						
Humerus ...	...	7	...	7	1	
Radius & Ulna ...	...	1	...	1	...	
Hips ...	1	4	...	5	...	
Wrist ...	...	1	...	1	...	
Jaw ...	...	3	...	3	...	
Eye-ball ...	...	1	...	1	...	
Femur ...	1	...	...	1	...	
Elbow ...	...	2	...	2	...	
Fractures ...	9	112	7	121	13	
Gun-shot Wound ...	...	8	1	8	1	
Rupture of Urethra ...	...	1	...	1	...	
Concussion of Brain ...	...	1	1	1	...	
Foreign Bodies ...	...	6	...	6	...	
Carried over	386	20,900	1,265	21,286	561	

Diseases.				Remaining at end of 1906.	Yearly Total.		Total cases treated.	Remaining at end of 1907.	Remarks.
					Ad- missions.	Deaths.			
Brought forward				386	20,900	1,265	21,286	561	
MALFORMATIONS :—									
Head ...	...	...	...	...	4	...	4	...	
Thorax	...	...	...	...	...	...	...	...
Abdomen	...	...	...	...	...	...	...	...
Upper Limb	...	...	...	...	2	...	2	...	
Lower Limb	...	...	...	...	...	...	...	...
POISONS :—									
Mineral	...	...	...	...	4	2	4	...	
Vegetable	...	...	...	...	2	...	2	...	
Animal	...	...	...	...	...	...	...	...
PARASITES :—									
Tape Worms	...	...	...	...	1	...	1	...	
Round Worms	...	...	...	1	110	...	111	3	
Thread Worms	...	...	...	...	1	...	1	...	
Bilharzia Hoematobia	...	...	...	1	35	...	36	...	
<i>Filariasis :—</i>									
Elephantiasis	...	...	...	...	32	...	32	4	
Chyluria	...	...	...	...	6	...	6	...	
Ankylostoma	...	...	...	1	163	2	164	3	
Itch ...	...	...	...	6	975	...	981	13	
Other Parasites	...	...	...	...	11	...	11	...	
Not Specified*	...	...	...	8	972	...	980	19	
Parturition—(<i>Uncomplicated</i>)	...	...	...	1	137	...	138	5	
TOTAL				404	23,355	1,269	23,759	608	

* Includes mothers admitted with their sick children and vice versa, malingering, &c.

SUMMARY.

Diseases.				Remaining at end of 1906.	Ad- missions.	Total cases treated.	Remaining at end of 1907.	Remarks.
General Diseases	...	...	...	176	10,884	11,060	269	
Diseases of the Nervous System	...	...	...	8	426	434	21	
„ „ Eye	...	...	...	9	417	426	13	
„ „ Ear	...	...	...	3	68	71	2	
„ „ Nose	...	...	...	...	6	6	...	
„ „ Circulatory System	...	...	...	4	241	245	7	
„ „ Respiratory System	...	...	...	23	1,541	1,564	29	
„ „ Digestive System	...	...	...	27	1,731	1,758	25	
„ „ Lymphatic System	...	...	...	8	963	971	37	
„ „ Urinary System	...	...	...	12	580	592	16	
„ „ Generative System	...	...	...	14	582	596	17	
Affections connected with Pregnancy and Parturition	...	...	...	2	110	112	3	
„ „ Organs of Locomotion	...	...	...	8	165	173	10	
„ „ Cellular Tissue	...	...	...	29	832	861	38	
„ „ Skin	...	...	...	31	1,108	1,139	33	
Injuries	...	...	...	32	1,246	1,278	41	
Malformations	...	...	...	...	6	6	...	
Parasites	...	...	...	9	1,334	1,343	23	
Poisons	...	...	...	...	6	6	...	
Not specified	...	...	...	8	972	980	19	
Parturition (<i>Uncomplicated</i>)	...	...	...	1	137	138	5	
Total...				404	23,355	23,759	608	

Return of Births.

				Number.	Deaths.	Remarks.
Born alive at term	...	...	...	119	1	
Prematurely born	...	...	...	22	20	
Still-born	...	...	...	24		
Total				165	45	

RETURN OF SURGICAL OPERATIONS.

Operations.				Number.	Deaths.	Remarks.
Operations for Tumours	...	...	...	41	...	
„	Evacuation of Abscesses	...	...	912	9	
„	Removal of Foreign Bodies	...	...	7	...	
Operations on Blood vessels	...	...	...	11	...	
„	Lymphatic Glands	...	...	28	...	
„	Skin and Subcutaneous Tissues	...	...	122	...	
„	Bones	...	...	53	2	
„	Nerves	...	...	...	...
„	Joints	...	...	29	2	
„	Muscles and Tendons	...	...	5	...	
„	Skull and Brain...	...	...	2	...	
„	Eye ...	...	...	125	...	
„	Ear ...	...	...	12	...	
„	Head and Face ...	...	...	34	...	
„	Chest	...	...	29	1	
„	Abdominal Cavity	...	...	101	6	
„	Liver	...	...	35	18	
„	Spleen	...	...	...	...
„	Rectum and Anus	...	...	29	...	
„	Urinary system ...	...	...	77	...	
„	Male Generative Organs	...	...	205	...	
„	Female Generative Organs	...	...	11	...	
Amputations	...	...	...	40	5	
Obstetric Operations	...	...	...	14	2	
Other Operations	...	...	...	27	...	
Total				1,949	45	

*General Return of Mental Diseases,
Admissions and Deaths in 1907 at the Lunatic Asylum.*

Mental diseases.	Remaining at end of 1906.	Yearly Total.		Total number of cases treated.	Remaining at end of 1907.
		Admis- sions.	Deaths.		
Idiocy	13	8	1	21	15
Mania	215	38	16	303	224
Melancholia	35	10	1	45	34
Dementia	116	2	4	118	113
Delusional Insanity ...	44	6	1	50	48
Total	423	114	23	537	434
Admitted on Interim Order but :—					
(a) found sane by the Commissioners in Lunacy	1	4	...	5	...
(b) not yet reported upon by the Com- missioners in Lunacy.	...	1	...	1	1
Total... ..	424	119	23	543	435

Note.—Exclusive of the Chinaman, Ah-Wen, absconded and not yet recaptured.

Annexure III.

Statement showing the number of Plague cases and mortality among them during the year 1907.

Districts.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Total.		Percentage mortality.
	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	
Port Louis	6	16	...	1	...	...	...	1	...	...	3	...	2	...	1	4	3	22	5	30	3	20	...	6	18	105	85.4
Pamplemousses	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	4	...	4	...	...	1	8	88.9
Riv. du Rempart	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Flacq	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Grand Port	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	100.
Savanne	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	4	...	100.
Plaines Wilhems	3	14	7	18	...	3	2	2	...	1	...	...	...	...	...	...	1	3	3	6	8	7	1	2	26	55	67.9
Black River	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	100.
Moka	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	1	4	80.
Totals	10	30	7	21	...	3	2	3	...	1	3	2	...	2	1	4	4	26	9	40	11	31	2	14	46	178	79.5
No. of cases detected	40		28		3		5		1		3		2		5		30		49		42		16		224		

Note :—C = Cured.
D = Died.

5.

100

A. Epidemic period.

Note ; — C = Cured.
D = Died,

H. LORANS,
Director.

ANNEXURE V.

Report of Dr. F. J. R. Momplé, Acting Assistant Director and Chief Sanitary Officer, on the work done in the Sanitary Branch in 1907.

The work done by the staff of Sanitary Inspectors and Guards is shown in the annexed tabular statements; Port Louis as usual is considered separately from the other districts.

Port Louis :—During the year covered by this report the Sanitary Officers paid 15,408 visits to private premises and 285 to lodging-houses. Shops, markets, bake-houses, slaughter-houses and butchers' shops were the subject of 2,219 visits. The staff were besides employed 10,572 times on special duties in connection with enquiries, supervision of cremations and exhumations, &c. They also controlled the performance of the night soil service of the town on 591 occasions and made 1,997 inspections of stables, cow-sheds and pig-sties both in town and in the extra urban portion of the district. To the various Government Establishments, public and private gratuitous latrines, cemeteries, noxious factories, camps, water courses and lavatories, 2,775 visits were paid.

During the year under review a total of 54 days' work was performed on quarantine. This duty was however exclusively entrusted to the special staff of disinfectors.

The Sanitary Officers besides, attended Court on 265 occasions.

The total number of contraventions of the different Sanitary Regulations detected during the year amounted to 665 and out of these 8 had not been finally dealt with at the close of the year.

The usual defects referred to in previous reports were detected in the scavengering and the general care of the urban area of Port Louis. On 838 occasions nuisances detected by the Sanitary Staff, falling under the provisions of Ordinance No. 23 of 1903, were reported to the Municipal Corporation for abatement and out of them only 480 had received attention at the end of the year.

In accordance with the provisions of the above Ordinance this Department had to move Government to abate certain serious nuisances the removal of which had repeatedly, but without effect, been requested from the Municipality. The Department of Public Works and Surveys carried out the works required in that connection, and 825 feet of underground drain were repaired and improved, a radier 50 feet long was constructed, 4,189 feet of gutters were pulled up and relaid or pointed as was necessary, 54.2 superficial yards of street pavement were pulled up and relaid and 5 gargouilles were repaired.

Besides these, 63 other public nuisances were brought to the notice of the Department of Public Works and Surveys for

removal, while 3,107 notices were served with a view to abate private ones.

The Swine Destruction Ordinance continued to be applied during the year and 143 stray pigs were shot by the Police. These animals have however on frequent occasions been the cause of serious nuisance.

The scavengering service of the extra urban area of Port Louis, as in the past three years, has been attended to by gangs of labourers and two carts employed by this Department, extra labour being occasionally resorted to when necessary.

There has been no change in the manner of performing the night soil service of the greater part of the town of Port Louis and the primitive method of removal by tubs and carts, by the side of the efficient water carriage system, which although further extended during the year under review, is however working in an as yet very limited area of the town, has continued to be an eyesore and a not unfrequent cause of complaint.

The following note kindly supplied by the Drainage Department shows the principal works which have been carried out in connection with that system :—

(a) Drainage of District III completed, the one remaining property having been connected with the main sewer.

(b) 91 premises connected in District IV, almost completing the drainage of the area.

(c) 3 miles of underground sewers laid in the District II.

The water supply of Port Louis has remained the same, unsatisfactory, through constant exposure to pollution. In this connection a good deal of importance attaches to the fact that the incidence of typhoid fever compared with that of the preceding year has been more marked; 13 cases having been notified during the period under review against 4 during the course of 1906.

The necessity of improving this water supply has already been brought to notice by this Department on several occasions and attention called to the dire consequences to which the population of the town would be exposed were cholera unfortunately to find its way into the Colony.

The inspection of Common lodging-houses and insanitary premises in the town and district of Port Louis has continued to receive special attention from the local Sanitary Authority and 1,421 orders under Ordinance No. 21 of 1900 were served by him during the year. As mentioned already, a good deal of difficulty has been encountered in obtaining the execution of the works asked for, owing to the limited pecuniary means or destitute condition of some of the owners of premises requiring improvements.

The Sanitary Staff have as usual exercised strict supervision over the milk trade, and milk sold in Port Louis was tested on 954 occasions.

*Rural Districts :—*The statement of sanitary contraventions, collections, fines, &c., in the rural districts during the year is shown in Annexure A.

The number of contraventions detected was 1,523. Prosecution had to be resorted to in 905 cases and the fines imposed amounted to Rs. 3,257.43 ; out of 9,975 notices served for the abatement of nuisances, 1,077 had not been complied with at the end of the year. The total amount of fines inflicted by the Magistrates on 318 persons who were prosecuted for non-compliance with notices was Rs. 850.45.

The fees collected in the Cemeteries and Markets under the management of the Department amounted to Rs. 20,652.22.

In the four public Abattoirs under the charge of this Department the collections amounted to Rs. 9,126 on account of 4,365 animals slaughtered therein.

The Estate camps have on the whole been maintained in a more satisfactory state of upkeep during the year under report, but some difficulty has still been met with in dealing with loose animals in certain of these camps.

The necessity of inducing Indians in camps and the residents of villages to resort to latrines instead of defiling the soil in their vicinity, especially when the huts are situated near water courses has again attracted attention on account of the spread of ankylostomiasis which appears to be steadily gaining ground in the Colony.

The work of the Sanitary Department has, as usual, included the supervision of noxious factories of which the following have been authorized during the year :—

Bambara Curing Factories...	...	...	3
Lime-kilns	...	...	1
Manure Factories...	...	...	2
Aloe Fibre Factories	...	...	6

Water supply :—

The District Boards of Savanne, Grand Port, Moka, Pamplémousses and Black River have during the year carried out various works tending to the improvement or extension of the water supplies under their charge and several fountains in Plaines Wilhems district formerly fed with water from more or less suspicious canals have been connected with the Mare-aux-Vacoas plant.

These works testify to the keen interest bestowed on the amelioration of the water supply of the country districts. It should however be remarked that as yet but a small amount of work has been effected compared with what would be required to secure the desired object, and that the water supply in most parts of the Colony still remains unsatisfactory from the various causes already pointed out in previous reports.

F. J. R. MOMPLÉ,

Acting Assistant Director.

20th. May, 1908.

Medical and Health

STATEMENT OF ALL SANITARY CONTRAVENTIONS,

DISTRICTS.	CONTRAVENTIONS.				NOTICES SERVED.																
	Number.	No of cases in which parties were warned and articles seized and destroyed.	No. of parties prosecuted.	Amount of Fines.		Under Regn. 96 of 1877.	Regn. 185 of 1879.	Regn. 79 of 1883.	Regn. 162 of 1885.	Regn. 234 of 1889.	Regn. 263 of 1893.	Ord. 32 of 1894-95.	Regn. 130 of 1898.	Ord. 35 of 1863.	Ord. 21 of 1900.	Regn. 498 of 1900.	Regn. 198 of 1907.	Ord. 90 of 1889.	Ord. 167 of 1890.	Regn. 65 of 1903.	In Abeyance.
				Rs.	c.																
Amplemousses— Lower ...	30	1	29	34	50	...	14	...	55	34	21	201	...	...	...	...	...	...	...	...	...
— Upper ...	47	4	43	69	...	...	...	...	57	...	...	91	...	...	...	...	...	...	...	...	...
ivière du rempart ...	111	69	42	192	75	...	22	...	77	1	...	134	...	...	...	...	...	...	...	...	33
lacq—Northern ...	62	7	55	190	...	2	12	...	131	...	5	252	...	1	...	...	...	3	3	3	...
—Southern ...	37	6	31	254	50	...	...	...	78	...	...	108	...	...	...	26	...	...	...	...	...
ose Belle ...	43	4	39	71	15	...	11	...	122	...	490	437	11	...	2	...	...	...	...	...	27
rand Port...	63	4	59	110	05	...	...	...	107	...	...	148	...	...	...	...	...	...	...	...	...
evanne ...	79	...	79	348	95	...	...	...	215	...	...	799	...	...	...	...	...	...	...	...	...
ack River...	119	5	114	137	78	...	39	...	139	7	...	195	...	...	...	...	...	...	5	...	64
arepipe ...	82	10	72	480	...	...	...	...	478	...	...	1,399	158	...	...	11	...	...	...	...	...
acoas & Phoenix ...	85	6	79	307	...	...	...	...	163	...	...	416	...	...	...	...	...	...	...	3	...
atre Bornes ...	301	221	80	306	...	...	...	...	320	...	...	711	...	...	...	...	...	...	...	...	...
au Bassin & Rose Hill ...	414	275	139	516	50	...	1	...	578	...	...	1,023	114	...	49	...	...	...	1	...	...
oka ...	50	6	44	239	25	1	10	...	5	65	...	411	...	...	...	...	...	...	...	...	...
Total ...	1,523	618	905	3257	43	3	109	...	2,525	107	516	6,325	283	151	11	26	3	3	12	124	...

DETAILS OF

Districts.	Ord. 8 of 1898.	Regn. 63 of 1875.	Regn. 107 of 1876.	Regn. 96 of 1877.	Regn. 97 of 1877.	Ordce. 12 of 1878.	Regn. 148 of 1878.	Regn. 185 of 1879.	Regn. 134 of 1883.	Regn. 162 of 1885.	Ordce. 9 of 1889.	Ordce. 67 of 1885.	Regn. 234 of 1889.	Regn. 332 of 1891.	Regn. 189 of 1892.	Regn. 263 of 1893.
Amplemousses— Lower.	5	...	...	...	...	...	...	11	...	...	2	...	...	11	...	...
" — Upper.	5	2	...	...	...	...	3	3	...	3	5	2	5	...	...	1
ivière du Rempart	...	...	...	...	...	20	1	17	...	7	17	1	1	...	...	...
lacq—Northern	1	...	...	...	...	8	...	4	1	16	3	4	...	...	...	...
" —Southern	...	...	...	3	...	6	...	...	...	2	...	4	...	...	...	...
ose Belle	...	...	...	1	...	5	1	8	1	18	1	1	...	...	...	...
rand Port	...	...	...	...	...	...	...	23	...	1	...	5	...	1	26	...
evanne	2	...	...	1	1	...	2	43	...	17	...	...	...	...	...	...
ack River	...	2	...	...	...	64	...	2	...	18	1	...	1	...	...	...
arepipe	20	...	...	1	...	...	2	...	2	...	...	9	...	...	4	...
acoas & Phoenix	6	...	...	1	...	2	1	...	...	10	5	7	5	...	...	...
atre Bornes	5	...	...	...	...	2	1	1	1	135	...	3	...	...	...	...
au Bassin & Rose Hill	1	2	...	...	...	...	2	1	5	186	1	5	...	3	...	...
oka	2	1	...	...	...	...	...	...	2	5	4	3	4	...	...	...
Total	1	46	7	7	1	107	13	113	12	418	39	44	16	15	30	1

Department.

COLLECTIONS, &c., FOR THE YEAR 1907.

Complied with.	Not complied with.	No. of parties prosecuted for non-compliance with.	Amount of Fines.		ABATTOIRS.								CEMETERIES.				MARKETS.		ABATTOIRS.					
					No. of Private	No. of Public	No. of animals killed in each Public Abattoir.							No. of Private	No. of Public	No. of burials in public	Fees collected.		No. of	Amount of Fees collected.		No. of	Amount of Fees collected.	
			Oxen.	Cows.			Calves.	Swine.	Deer.	Goats.	Sheep.	Rs.	c.				Rs.	c.		Rs.	c.		Rs.	c.
324	1	1	2	...	...	1	103	79	182	...	...	...	...	3	...	...	...	...	1	199	25	1	819	...
137	11	11	8	...	1	...	...	...	...	...	...	...	...	7	1	2,304	3,120	...	...	...	...	...	...	...
199	35	2	2	25	...	...	...	...	...	...	...	...	...	15	3	501	961	...	...	...	...	...	...	...
405	7	3	...	...	2	...	...	...	...	...	...	...	...	13	1	204	180	...	...	...	...	...	...	...
181	31	...	...	...	...	...	...	...	...	...	...	...	...	3	2	941	2,947	50	...	...	...	...	...	...
1,063	10	10	4	...	3	...	...	...	...	...	...	...	...	5	1	501	1,026	...	...	...	...	...	...	...
250	5	5	45	75	...	1	505	99	68	279	...	81	2	6	2	357	715	50	1	1,292	77	1	2,259	...
992	22	22	214	20	2	1	181	35	47	...	...	...	...	4	3	969	2,179	50	...	...	...	1	634	...
357	28	28	30	50	1	...	...	...	...	...	...	...	...	6	3	434	820	...	...	...	...	...	...	...
1,941	105	24	33	75	1	...	...	...	...	...	...	...	...	...	1	...	...	...	1	2,040	05	...	...	...
538	44	44	106	...	1	...	...	...	...	...	...	...	...	2	1	1,035	1,850	...	...	...	...	...	...	...
683	348	37	110	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
1,363	403	102	256	...	...	1	1,333	243	164	405	1	550	8	1	2	696	1,312	90	2	747	75	1	5,414	...
465	27	27	38	...	1	...	...	...	...	...	...	...	...	7	2	774	1,260	...	...	...	...	...	...	...
8,898	1,077	318	850	45	12	4	2,122	456	461	684	1	631	10	73	22	8,716	16,372	40	5	4,279	82	4	9,126	...

* Closed.

CONTRAVENTIONS.

Ordee. 32 of 1894-95.	Regn. 130 of 1898.	Ordee. 8 of 1898.	Regn. 25 of 1900.	Regn. 167 of 1900.	Regn. 177 of 1883.	Regn. 68 of 1876.	Regn. 79 of 1882.	Ordee. 21 of 1900.	Regn. 498 of 1900.	Regn. 32 of 1872	Regn. 180 of 1904.	Regn. 147 of 1898.	Regn. 198 of 1907.	Regn. 167 of 1890.	Regn. 29 of 1906.	Regn. 65 of 1903.	Regn. 448 of 1900.	Total amount Fines.	
																		Rs.	
1	34	5
17	1	...	...	...	...	...	...	...	...	69	...
40	...	2	...	...	...	...	...	...	5	...	...	...	...	...	...	...	...	192	7
9	3	...	...	...	...	...	...	...	...	...	2	...	...	3	8	190	...
19	3	254	5
5	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	71	1
5	2	...	...	...	...	110	0
13	348	9
29	2	...	137	7
2	3	...	31	1	2	1	4	...	...	...	...	...	...	...	...	480	...
44	2	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	307	...
147	4	...	2	...	...	...	...	...	...	306	...
132	18	...	...	...	...	...	...	13	6	5	...	1	33	...	...	...	...	516	5
27	2	...	...	...	239	2
490	20	2	7	...	31	1	2	14	21	6	2	1	37	2	1	5	11	3,257	4

F. J. R. MOMPLÉ,
Acting Assistant Director.

MEDICAL & HEALTH

Sanitary Branch

RETURN OF DUTIES PERFORMED

Inspectors.	Sections.	Private Premises.	Shops & Stores.	Lodging-houses.	Livery Stables.	Government Estabts.	Public Latrines.	Streams, Water courses, & Lavatories.	Gully Holes.	Special duties.	Special Enquiries.	Cemeteries.	Shores.	Slaughter-houses.	Tanneries.	Exhumations.	Inodore Estabts.
G. Chaillet ...	I	2,291	236	...	238	150	161	44	7	85	43	42	44	65	88	...	102
H. Dubois ...	II	2,638	179	74	166	66	37	37	16	37	53	...	...	20	...	...	...
A. Bouquet ...	III	2,458	42	...	222	25	...	157	77	141	25	...	...	...	...	...	...
W. L'Étang ...	IV	2,230	447	162	259	103	...	45	56	56	71	...	29	9	...	...	...
S. Caltaux ...	V	1,346	309	...	149	434	134	15	9	79	24	1	...	1	2	...	5
L. Jomain ...	VI	1,461	109	24	132	107	...	72	264	45	5	...	17	...	...	...	...
E. César ...	VII	1,342	28	...	40	...	8	37	28	21	25	...	...	...	...	...	...
P. Pitchen ...	VIII	1,642	146	25	142	70	45	34	88	68	48	31	25	...	...	4	...
Total ...	...	15,408	1,496	285	1,348	955	385	441	545	532	294	74	115	95	90	4	107

NOTICES ISSUED.

Inspectors.	Sections.	Orders. Ord. 21 of 1900.		Art. 29 Ordinance 32 of 1894-1895.		Regulations 220 of 1884.		Regulations 137 of 1882.		Schedule C. Ord. 32 of 1894-95 (Public Nuisances).	
		No. issued.	No. C.W. *	No. issued.	No. C.W. *	No. issued.	No. C.W. *	No. issued.	No. C.W. *	No. issued.	No. C.W. *
G. Chaillet ...	I	49	5	375	371	12	12	55	55	22	18
H. Dubois ...	II	206	80	505	473	106	104	...	...	181	101
A. Bouquet ...	III	202	150	332	288	109	106	7	6	120	51
W. L'Étang ...	IV	410	343	193	170	38	36	45	45	156	116
S. Caltaux ...	V	301	145	155	107	2	1	11	10	85	39
L. Jomain ...	VI	120	115	378	305	85	83	...	...	118	79
E. César ...	VII	31	12	273	221	169	159	16	16	55	23
P. Pitchen ...	VIII	102	93	162	129	78	70	1	1	101	53
Total...	...	1,421	943	2,373	2,064	599	571	135	133	838	480

* N. B. Including those remaining from preceding months.

Note : C. W. = Complied with.

DEPARTMENT.

Port Louis.

DURING THE YEAR 1907.

Morgues.	Attendance at Sales.	Markets.	Lighters.	Gratuitous Latrines.	Cremations.	Dhobies.	Bake-houses.	Lime-kilns.	Sales of Meat.	Factories.	Cow-sheds.	Docks.	Camps.	Pig-sties.	Seizures.	Quarantines.	Service of notices.	Control of public nuisances.	Milk examinations.	Scavengering neglects.	Waste lands.	Attendances at Court.
..	2	15	10	236	7	5	1	53	5	81	202	1	116	186	...	...	146	149	110	142	114	44
..	..	14	...	2	...	36	11	...	...	4	10	4	38	...	...	...	401	551	86	211	406	29
..	..	...	...	...	1	16	12	...	...	...	36	...	...	...	...	...	452	444	136	681	160	34
..	..	...	287	...	...	89	56	...	122	31	8	46	31	...	2	...	388	614	100	340	121	39
..	1	154	162	5	...	34	9	1	131	10	2	8	1	1	7	...	49	221	122	22	4	51
..	..	...	320	...	...	37	29	...	...	12	15	54	28	...	...	...	97	267	169	372	198	8
..	..	...	...	...	...	...	...	...	...	...	84	...	13	59	...	...	177	190	110	216	142	27
14	...	52	...	15	...	45	17	7	...	25	34	...	14	12	...	...	92	256	121	169	102	33
14	3	235	779	258	8	262	135	61	258	163	391	113	241	258	9	...	1,802	2,692	954	2,153	1,247	265

CONTRAVENTIONS.

Ordinance 32 of 1894-95.	Regulations 220 of 1884.	Regulations 137 of 1882.	Regulations 148 of 1878.	Regulations 192 of 1882.	Regulations 63 of 1875.	Regulations 134 of 1883.	Regulations 67 of 1885.	Ordinance 21 of 1900.	Regulations 65 of 1903.	Ordinance 47 of 898.	Regulations 213 of 1905.	Ordinance 25 of 1900.	Regulations 198 of 1900.	Fines	
														Rs.	c.
..	29	39	..	102	..	..	..	..	..	..	5	..	..	100	..
18	8	15	1	2	..	..	..	14	..	..	..	..	..	45	..
36	21	17	..	1	..	..	1	34	..	..	..	..	..	24	..
5	27	18	8	2	1	..	..	42	..	..	..	1	..	281	..
23	7	11	..	7	..	..	..	78	..	..	..	..	1	106	..
..	..	7	..	...	..	..	..	1	..	..	..	..	..	5	..
6	9	9	..	10	..	..	..	..	..	..	..	..	..	41	50
15	5	9	1	17	..	..	..	2	..	..	..	..	..	68	..
103	106	125	10	141	1	...	1	171	...	...	5	1	1	670	50

F. J. R. MOMPLÉ,
Acting Assistant Director.

ANNEXURE VI.

Report of Mr. L. Naz on the work done in the Building Branch and Sanitary Engineer's Section.

The following is a summary of the works executed during
last year :—

DRAINS.

1. *Rural Districts.*

(a) Five hundred feet of road side drains were constructed along the Royal Road, Rose Belle, to enable premises situated along the said road to dispose of their refuse and surface waters and prevent stagnation.

(b) Seven hundred feet of road side drains were constructed along the Royal Road, Flacq, in order to carry to a suitable place outside the village the main outfall drain (surface and refuse waters) of Centre of Flacq.

(c) Two hundred feet of road side drains were constructed along the Royal Road at St. Pierre in order to carry away the surface and refuse waters which remained in front of shops and inhabited premises.

(d) Three hundred feet of drains were constructed at Mahebourg to carry away surface as well as refuse waters from roads and premises.

2. *Extra urban area of Port Louis.*

(a) Seventeen hundred and thirty-two feet of drains were constructed along Desbouchers and Balisage Roads in order to provide for the disposal of surface as well as refuse waters which caused serious nuisance on these road ways.

(b) Two hundred and fifty feet of underground earthenware pipes of 5" were laid for the disposal of refuse waters at Grand River N. W. from premises which caused a serious nuisance on the public place.

3. *Anti-Malarial Works :—*

(a) *Phœnix.* In order to drain an extensive marshy area, (over two acres) fed by a stream, the marsh discharge channel was deepened to six feet on a length of eight hundred and fifty feet. A tunnel 17 square feet in section, two hundred feet long was constructed. These preliminary works were carried out to provide an outfall capable of draining the deepest portion of the marsh. The marsh proper was subsequently drained by means of a permanent central channel and over a thousand feet of lateral channels, 3 to 4 feet deep, meant to dry water-logged portions of the said marsh. The lateral channels were filled with rubble of gradually diminishing size in order to avoid exposed surfaces of possibly stagnant water which would facilitate the breeding of mosquitoes.

The abovementioned works were the preliminaries of a complete extensive drainage scheme which has been undertaken and carried out since.

(b) *Mon Plaisir*. During the year under review the drainage works commenced in the preceding years were continued with the result that about eight acres of previously water-logged and marshy lands were reclaimed by cutting suitable drainage trenches led to the newly provided outfall. Further works are still in progress.

4. *Maintenance works* :—

I. CEMETERY BUILDINGS.

(a) *Extensive Repairs* :—

Flacq Point Cemetery. The body, verandah and roof of keeper's quarters were renewed.

Quartier Militaire Cemetery. The roof of keeper's quarters was renewed.

Phoenix Cemetery. The verandah of the keeper's quarters was renewed.

Flicq en Flacq Cemetery. The keeper's kitchen was rebuilt

(b) *Minor repairs* :—

The keepers' as well as laborers' quarters were improved and repaired at Souillac, St. Amand, Curepipe, Plaine Magnien, Downs and Bois Marchand Cemeteries.

II. ABATTOIRS AND MARKETS.

The shingle roof of the Rose Hill abattoir buildings, of the Inspector's office and of the absorption pits were entirely renewed and all the buildings were given two coats of paint internally as well as externally.

The Souillac and Mahebourg abattoir buildings were also repaired.

The fences of Mahebourg and Rose Hill markets were completely repaired. The Mahebourg market roof was also painted externally.

III. LATRINES.

Repairs were effected to these buildings in the following places :—

Souillac, Mahebourg, Rose Belle, Curepipe, Rose Hill, Bambous, Pailles, Extra urban area of Port Louis, Pamplemousses, Poudre d'Or, Flacq, and a new latrine, at Beau Bassin, was erected on modern sanitary principles at a cost of Rs. 500.

5. *Building Section* :—

The following statement gives the number of permits deliver-

ed in each District of the Colony and the object for which they were issued :—

For New Constructions.

Districts.	Villages.	Other places.	Total.
Port-Louis (extra-urban area) ...	...	66	66
Pamplemousses	47	95	142
Rivière du Rempart	25	53	78
Flacq	43	117	160
Grand Port	41	137	178
Savanne	22	53	75
Plaines Wilhems	27	94	121
Moka	25	90	115
Black River... ..	9	19	28
Total	239	724	963

For Extensive Repairs.

Port Louis ... ..	...	19
Pamplemousses ... ..	...	36
Rivière du Rempart ... ..	...	7
Flacq ... ..	...	8
Grand Port ... ..	...	73
Savanne ... ..	...	30
Plaines Wilhems ... ..	...	20
Moka ... ..	...	21
Black River ... ..	...	7
Total ... ..	...	221

J. Loïs NAZ,

Sanitary Engineer.

ANNEXURE VII.

Annual Report on the Civil Hospital for the year 1907.

1. The number of admissions to the Civil Hospital in 1907 exceeded that of the preceding year by 446, but was practically the same as in 1905.

The following Table gives the admissions and deaths for the last ten years :—

TABLE I.

Years.	Admissions.	Deaths.
1898	5,658	356
1899	5,230	418
1900	5,260	410
1901	5,554	509
1902	6,092	428
1903	6,062	520
1904	5,573	379
1905	6,225	457
1906	5,784	404
1907	6,230	423

The year under review shares with 1905 the record of the highest number of admissions for the last 15 years. This result is not, however, attributable to the same cause in the two cases. In 1905, it was due to a severe epidemic of Malaria, while in 1907, not to any particular epidemic, but probably to increased poverty and increased faith in hospital treatment, especially in the surgical line. As a matter of fact, more persons now come to hospital who would formerly have been adverse to it, not only because they cannot afford to be privately attended, but because the hospital appears to have lost in the eyes of the educated public, the unjustifiable opprobrium formerly attached to its very name.

2. Table II gives the number of European, Creole and Asiatic patients admitted in 1907, as compared with the two preceding years :

TABLE II.

Nationalities.	1905.	1906.	1907.
Europeans. ...	113	86	40
Creoles ...	4,121	3,918	4,560
Asiatics ...	1,991	1,782	1,630
Total ...	6,225	5,786	6,230

These figures show a considerable yearly decrease in the number of European patients who, as already pointed out, consist chiefly of sailors belonging to ships in the harbour. This may be partly due to the fact that most of the steamers which now call in Mauritius are manned by native crews.

3. Table III classifies the admissions according to their respective designations and the districts from which they came :

TABLE III.

Districts.	Paupers.	Private Patients.	Police Force.	Prison Warders.	Police cases.	Port Department.	Non-paying patients.*	Total.	Deaths.
Port Louis . . .	4,203	487	476	31	45	7	432	5,681	354
Pamplemousses . . .	169	9	4	...	...	...	...	182	32
Rivière du Rempart	3	...	5	...	...	...	1	9	1
Flacq	8	3	6	3	...	...	3	23	10
Moka	143	...	4	...	...	...	2	149	12
Plaines Wilhems...	16	5	83	27	...	...	5	136	9
Grand Port . . .	2	...	1	...	...	...	...	3	...
Savanne	2	1	...	3	...	...	...	6	2
Black River . . .	20	1	20	...	...	...	...	41	3
Total	4,566	506	599	64	45	7	443	6,230	423

There were 5,681, admissions from Port Louis with 354 deaths and 549 from the country districts with 69 deaths, the death-rate being 6.2 p.c. for the Town patients and 19.5 p.c. for those coming from the country. This enormous difference conclusively shows the precarious state in which patients from some rural districts are usually received in this hospital. Admissions from Flacq and Pamplemousses gave the highest death-rates.

4. The total number of patients treated was 6,355 of whom 4,597 were males and 1,758 were females. The daily average number in hospital was the highest on record. This increase, which occurred chiefly among the female patients, gave rise to constant overcrowding in the female wards throughout the year.

* Non-paying patients are Government servants entitled to free Hospital treatment.

TABLE IV.

Daily average number in hospital.

Years.	Males.	Femals.	Total.
1905	160	67	227
1906	141	64	205
1907	156	75	231

5. Table V is a summary of admissions, discharges and deaths in 1907.

TABLE V.

	Males.	Females.	Total.
Number remaining at end of 1906... ..	85	40	125
Number admitted in 1907 ...	4,512	1,718	6,230
Total number treated ...	4,597	1,758	6,355
Total { Cured ...	2,618	977	5,752
number dis- { Relieved ...	1,326	440	
charged. { Not improved ...	221	170	
Number died	310	113	423
Remaining at the end of 1907	116	64	180

Patients discharged without improvement, as usual consisted of chronic and incurable cases not requiring active treatment and of patients who leave hospital at their own request and against the advice of the medical attendants. Many of the former category were transferred to convents and district infirmaries.

6. The rate of mortality, practically the same as last year, was comparatively low.

TABLE VI.

Years.	Number of patients treated.	Number of deaths.	Death-rate per cent. of patients.
1905	6,351	457	7.2
1906	5,784	404	6.9
1907	6,355	423	6.7

In 86 (or 20.5 p.c.) of the fatal cases, the patients, received in a moribund state, died in less than 72 hours after admission, viz :—

TABLE VII.

Died within 24 hours.	Died between 24 and 48 hours.	Died between 48 and 72 hours.	Total number died within 72 hours.
49	20	17	86

7. Table VII shows the relative frequency and mortality of the most important diseases for the last three years.

TABLE VIII.

Diseases.	Cases.			Deaths.			Case-mortality per cent.		
	1905	1906	1907	1905	1906	1907	1905	1906	1907
Malaria ...	1558	1031	1004	37	9	9	2.3	.87	.8
Tuberculosis ...	481	444	478	94	111	123	19.5	25.0	25.7
Influenza ...	347	533	292	19	6	17	5.0	1.1	5.8
Dysentery ...	228	258	276	56	54	53	24.5	20.9	19.2
Plague ...	30	30	18	9	15	9	30.0	50.0	50.0
Beri-beri ...	20	12	25	7	1	2	35.0	8.3	8.0
Syphilis ...	163	180	175	2	2	1	1.2	1.1	.5
Anæmia ...	152	106	189	3	3	3	2.0	28.3	1.5
Hyp. of Spleen ...	99	99	117	...	...	...	...	...	...
Tropical Phage- dæna ...	91	95	37	...	...	...	...	...	...
Bronchitis ...	309	289	375	3	4	6	1.1	1.3	1.6
Pneumonia ...	131	215	180	46	72	59	35.8	33.4	32.7
Bright's disease...	136	98	146	30	21	36	22.0	21.4	24.6
Rheumatism ...	146	154	183	1	...	...	6.0	...	...
Injuries ...	356	295	327	15	6	6	4.2	2.0	1.8
Ankylostomiasis ...	...	11	19	...	1	...	...	9.0	...
Erysipelas ...	...	27	17	...	3	2	...	11.1	11.7

It results from this Table that there was in 1907 an increased prevalence of Dysentery, Anæmia, Broncho-Pulmonary affections, Bright's disease and Rheumatism, as compared with the two preceding years. Syphilis and Tuberculosis showed no signs of abatement, the difference between the admissions for the last three years being only slight. The same cannot be said of Malaria which prevailed this year to a much less extent than in 1905, and showed a slight reduction as compared with 1906. Influenza, Plague and Tropical Phagedæna were likewise responsible for a less number of cases than in the two previous years.

8. The following is a comparative statement of the admissions and deaths during the four quarters of the year, for the last three years.

TABLE IX.

	Admissions.			Deaths.		
	1905.	1906.	1907.	1905.	1906.	1907.
First Quarter ...	2,034	1,584	1,416	118	89	69
Second Quarter ...	1,653	1,634	1,706	127	103	109
Third Quarter ...	1,413	1,512	1,545	120	130	133
Fourth Quarter ...	1,125	1,054	1,563	92	82	112
Total ...	6,225	5,784	6,230	457	404	423

This Table shows that, as in 1905, the morbidity was highest in the second quarter and the mortality highest in the third. The fourth quarter, however, in marked contrast to the two previous years, was characterized by an unusual prevalence of sickness, owing partly to an increase, exceptional at this season, in the incidence of certain diseases, viz : Malaria, Dysentery and Bronchitis, partly to an increase in the admissions for anæmia and hypertrophy of the spleen, and partly to the large number of surgical cases admitted.

9. Table X shows the comparative prevalence of the most important diseases in the different months of the year.

TABLE X.

Months.	Malaria.	Hypertrophy of Spleen.	Anæmia.	Dysentery.	Rheumatism.	Tuberculosis.	Influenza	Bronchitis.	Pneumonia.	Plague.	Tropical Phagedæna.	Measles.
January ...	57	5	6	11	20	35	...	13	1	2	6	...
February ...	99	2	8	18	11	28	5	27	10	1	1	...
March ...	128	10	6	18	15	41	45	19	8	...	4	...
April ...	149	8	22	29	13	41	41	32	7	...	2	...
May ...	135	10	12	32	5	33	31	14	14	...	1	1
June ...	96	12	9	28	19	39	41	40	12	...	1	...
July ...	71	11	11	17	11	28	23	33	6	1	4	...
August ...	44	13	26	23	15	45	71	64	23	...	7	...
September ...	34	8	21	23	21	44	12	34	22	6	1	...
October ...	57	8	11	23	13	47	11	34	29	4	4	7
November ...	52	11	24	23	15	46	7	30	27	4	5	18
December ...	73	18	29	31	16	33	5	32	19	...	...	2
Total ...	995	116	185	276	174	460	292	372	178	18	36	28

Malaria prevailed to the greatest extent in March, April and May, and Dysentery in April, May and June. Both diseases showed besides a tendency to increase in December. The largest number of admissions for Influenza and Bronchitis was recorded in August, while Pneumonia raged chiefly in August, September, October and November. The variations in the incidence of the chronic states : Anæmia, Hypertrophy of Spleen, Tuberculosis and Rheumatism are accidental and cannot be traced to any seasonal influence.

10. *Malaria*. Although, as usual, the most prevailing disease met with in hospital, Malaria, as in the preceding year, did not show the severe epidemic character recorded in 1905.

The following Table gives the comparative prevalence and severity of Malarial Fever since 1900.

TABLE XI.

Years.	Cases.	Deaths.
1900	1,047	27
1901	818	16
1902	1,120	4
1903	942	21
1904	807	8
1905	1,549	37
1906	1,022	9
1907	1,004	9

TABLE XII.

Clinical return of Malarial Fever for the last 3 years.

Types.	Number of Admissions.			Number of Deaths.		
	1905.	1906.	1907.	1905.	1906.	1907.
a. Intermittent :—						
Quotidian ...	708	646	394	3	1	...
Tertian ...	96	17	15	...	...	...
Quartan ...	23	4	...	...	...	...
Irregular ...	56	2	7	...	...	1
Type undiagnosed ...	488	315	553	...	...	4
b. Remittent ...	130	22	20	6	3	3
c. Pernicious ...	48	16	6	28	5	1
Total ...	1,549	1,022	995	37	9	9

By far the great majority of the cases that came under notice in 1907, had single uncomplicated attacks of a few hours' duration, and could not consequently allow of their type being

clinically diagnosed. Unfortunately, for reasons explained in previous reports, the microscopical examination of blood films could not be systematically made. The four fatal cases returned under the category of "type undiagnosed", were patients brought to hospital in "articulo mortis," who died a few hours after admission. The diagnosis of Malarial Fever in these cases, was made by the Police Surgeon and Assistant Medical Superintendent, on p.m. examination.

Under the term *pernicious* are included 4 cases of Black-water Fever, three of which recovered under the subcutaneous administration of saline solution. The fourth patient, an Indian boy of 2½ years, was discharged at the request of his parents before being cured. Two of the patients were Europeans and the remaining one was an Indian woman. Personally, I would prefer Hæmoglobinuric Fever to be returned under a separate heading, as I have some doubts as to its being of malarial origin. Cases of chronic malaria characterized by Anæmia and Hypertrophy of the Spleen were more frequently met with than in the two previous years.

On the occasion of a visit to the Civil Hospital, Professor Ronald Ross expressed the wish to see cases of Hypertrophy of the Spleen with Anæmia and Ulcers of the leg, with a view to ascertaining whether Kala-Azar existed in Mauritius. A number of such cases were shown to the distinguished scientist, who took films from the ulcers, and subsequently informed me that the result of the microscopical examination was negative, so far as Kala-Azar was concerned. Besides, according to Professor Ross, the general appearance of the patients shown to him essentially differed from that found in Kala-Azar, which was a decidedly more fatal disease than the Malarial Cachexia from which these hospital patients were in reality suffering.

In the Appendix to this report will be found the clinical record and p.m. appearances of a case of calcareous deposits in the spleen.

11. Dysentery.

TABLE XIII.

	Cases.			Deaths.		
	1905.	1906.	1907.	1905.	1906.	1907.
Acute Dysentery ...	133	176	125	8	6	3
Chronic Dysentery...	93	76	151	48	48	44
Total ...	226	252	276	56	54	47

There was a marked increase in the admissions for Dysentery as compared with the two previous years. The chronic cases were more numerous than usual, but proved more amenable to treatment, as is shown by the great reduction in the death-rate.

12. *Tuberculosis*.—Tuberculosis, as usual, holds a prominent place in the nosological returns of this hospital. There were no fewer than 460 admissions for this disease in the course of the year. The total number of cases treated was 478, ninety per cent. of which were of the pulmonary variety, as can be seen from the following Table :—

TABLE XIV.

	Cases.	Deaths.
Pulmonary Tuberculosis...	430	108
Tubercular Enteritis ...	15	7
„ Meningitis ...	2	2
Tuberculosis of bone ...	8	1
Tubercular Arthritis ...	1	...
Tuberculosis of Glands ...	15	...
Tabes Mesenterica ...	3	3
Atrepsia ...	2	2
Tubercular Laryngitis ...	1	...
„ Cystitis ...	1	...
Total ...	478	123

The following statement compares the yearly admissions for Tuberculosis since 1902, and shows the high proportion of deaths from this disease alone to the deaths from all causes :—

TABLE XV.

Years.	Admission for all causes.	Admissions for Tuberculosis.	Proportion of Admissions for Tuberculosis to admissions for all causes.	Deaths from all causes.	Deaths from Tuberculosis.	Proportion of deaths from Tuberculosis to deaths from all causes.
1902	6,092	554	6.7 p. ct.	428	106	24.7. p.c.
1903	6,062	502	8.2	520	129	24.8
1904	5,573	543	9.7	379	112	29.3
1905	6,225	465	7.4	457	94	20.4
1906	5,784	444	7.6	404	111	27.4
1907	6,230	460	7.3	423	123	29.1

The figures in the third column no doubt show an appreciable reduction in the admissions for Tuberculosis in the last three years, but the death-rate keeps deplorably high. This year, especially, 25.7 per cent. of the cases proved fatal, and Tuberculosis

alone accounts for more than one-fourth of the deaths from all causes. This most unsatisfactory result is due mainly to the fact that the great majority of Tuberculous patients repair to hospital when in the last stage of the disease, many altogether beyond improvement. Nearly two-thirds of the deaths occurred in less than three weeks after admission, as is shown in the following statement:—

TABLE XVI.

Died in less than 24 hours after admission	...	...	5
„ in 24 to 48 „ „ „	...	...	3
„ in 48 to 72 „ „ „	...	...	10
„ on the 4th. day „ „ „	...	...	4
„ on the 5th. „ „ „	...	...	6
„ on the 6th. „ „ „	...	...	8
„ on the 7th. „ „ „	...	...	5
„ between 1 and 2 weeks „ „ „	...	...	19
„ „ 2 and 3 „ „ „	...	...	16
Total			76

I have dwelt at full length on this subject in previous reports, especially in that for 1903, when I submitted my objections to the treatment of Tuberculous patients in a general hospital and to the use of the small and unpractical spittoons supplied to the Tuberculous wards. I advocated at the time the creation of a large and central sanatorium, but, short of this ideal scheme which, I am afraid, is far the time being, beyond the financial resources of this Colony, it would be highly beneficial to all concerned, if Tuberculous patients were received in special isolated pavilions attached to the general hospitals, and so constructed, as to allow of open air treatment. Such pavilions would have to be provided with wide mouthed spittoons raised about three feet from the floor, as recommended by me in 1903. I need hardly say, that special articles of clothing and bedding, table utensils, &c., &c., should be set apart for such cases. The dieting should be left entirely to the discretion of the medical officers and should not be restricted to any fixed scale. The maintenance of these Tuberculous patients being necessarily more costly than that of other patients, would have to be provided for by a special item in the estimates. I do not think however that the outlay involved in the carrying out of this scheme would be so expensive as to prevent its realization.

13. *Enteric Fever*:—There were four cases of Enteric fever, of which three ended fatally. The three patients that died were Chinamen, one of whom expired a few hours after admission. In the last mentioned case, the characteristic lesions, together with an intestinal perforation, were detected on p. m. examination.

In the three other cases, the diagnosis was confirmed by Vidal's sero-reaction. The patient who recovered belonged to the educated class.

14. *Measles*:—Measles prevailed in an epidemic form in the last quarter of the year, the majority of the cases being met with in November. The disease, as observed in the Civil Hospital, had a comparatively mild character, no case ending fatally.

15. *Plague*:—The cases were comparatively few, viz: 18 as compared with 30 in 1905, and 30 in 1906. Half of the cases were transferred to the Plague Lazaret, the remaining half, too ill to be removed with safety, died shortly after admission.

16. *Erysipelas* :—There were 16 cases of *Erysipelas* as compared with 27 in 1906. I am glad to say that in no case was the disease contracted in hospital. There were two deaths, viz : one from Cardiac complication, the other from extensive *Erysipelas* of the face occurring in an old and weakly woman.

17. *Beri-Beri* :—There were 22 admissions for *Beri-Beri* as compared with 10 in 1906. The following Table gives the nationality of the patients and the places they came from :—

TABLE XVII.

Creoles.	Chinese.	Indians.	Total.	Where from.
...	11	...	11	New Chinese immigrants residing in Port Louis.
...	6	...	6	Landed from S.S. Dagmar.
1	...	1	2	Central Prisons.
3	...	...	3	Eagle and Salomon Islands.
...	
4	17	1	22	

Besides the three cases from Eagle and Salomon Islands, two or three more patients from the Oil Islands were admitted with slight paresis of the legs ; but the signs in their case were not sufficiently marked to justify the diagnosis of *Beri-Beri*. It is quite possible that they were cases of *Beri-Beri* in the convalescent stage.

18. *Syphilis*.—The following Table, which gives the admissions for the last six years, shows the gradual increase in the case incidence of this disease. There was however a slight decrease in 1907 as compared with the preceding year :—

TABLE XVIII.

Year.	Number of admissions.
1902	110
1903	128
1904	142
1905	154
1906	175
1907	164

The total number of cases treated was 175, classified as follows :—

TABLE XIX.

	Cases.	Deaths.
Inherited	4	1
Primary	45	.....
Secondary	65	.....
Tertiary	61	.....
Total... ..	175	1

19. *Obstetrical Returns by Dr. Sauzier, Assistant Medical Superintendent.*

There were 60 confinements and 4 abortions, as against 45 confinements and 5 abortions last year. They have been classified as follows :—

1. Premature Delivery	...	...	...	...	5
2. Uncomplicated labour (L.O.A. presentations)	...	...	...	...	52
3. Complicated labour :—					
(a) Post partum eclampsia	...	...	...	...	1
(b) Footling presentation	...	...	...	...	1
(c) Contracted rickety pelvis	...	...	...	...	1
					60

The return and classification of births is as follows :—

TABLE XX.

Labours.	Number of Confinements.	Number of children born.			Total.
		Alive and discharged from hospital.	Still-born.	Dying after birth.	
1. Full term { (a) Normal. 52 (b) Complicated. 3 }	55	49	3	3	58
		1	2	...	
2. Premature ...	5	...	4	1	5
Total	60	50	9	4	63

63 births resulted from 60 confinements, of which 5 were premature and 55 full term. Of the 55 full term deliveries, two were cases of twins, and one a case of quadruplets. In this latter case, which is detailed in the appendix, two of the foetuses were full term, and the other two were not viable. In fact, they looked as if their development had been arrested at about the fourth month of pregnancy. They have, consequently, not been included in this return.

Premature delivery occurred in 5 cases. Two of the mothers suffered from chronic Malaria attended by extreme Anæmia and Debility, one from chronic Dysentery, one from advanced Pulmonary Tuberculosis, and the fifth from Broncho-Pneumonia. Three of them died.

The prematurely born children were all still-born. Of the 50 children born at full term and discharged from hospital, 30 were males and 20 females.

Mortality of Mothers.

12 mothers died in hospital, either after abortion or confinement, the cause of death in each case being as follows :—

(a) Chronic Bright's disease	...	...	...	2
(b) Pulmonary Tuberculosis	...	...	...	2
(c) Chronic Malaria and Anæmia	...	...	...	2
(d) Post Partum Eclampsia	...	...	...	1
(e) Eclampsia at 4th. month of pregnancy	...	...	...	1
(f) Mitral disease of the heart...	...	...	...	1
(g) Broncho-Pneumonia	...	...	...	1
(h) Chronic Dysentery	...	...	...	1
(i) Gangrene of vagina and cervix	...	...	...	1
				12

No case of Puerperal fever came under notice during the year.

20. SURGICAL WORK.

(a) 646 surgical operations were performed of which 192 under chloroform.

TABLE XXI.

Comparative statement of operations made with and without anæsthetics in the last three years.

	1905.	1906.	1907.
Chloroform	165	139	192
Cocaine	40	92	89
Chloride of Ethyl (local)	78	} 255	99
Without Anæsthetic	249		266
Total	532	486	646

The number of chloroform administrations is the highest ever recorded in this hospital. No accident occurred from the use of this anæsthetic.

Return of Surgical Operations.

TABLE XXII.

	Cases.	Deaths.	Remarks.
1. <i>Removal of Tumours :—</i>			
(a) Non Malignant :			
Excision of uterine polypus.	1		
" " Sebaceous cysts.	10		
" " Angioma of face	1		
" " Papilloma ...	2		
" " Fibroma ...	2		
" " Epulis ...	1		
" " Adenoma of breast.	1		
(b) Malignant :			
Excision of Epithelioma ...	2		
Scirrhus of Mamma ...	1		
Secondary growths in mamma	1		
2. <i>Amputations :—</i>			
Amputation of fingers ...	5		
" " leg ...	1		
" " thigh ...	1	1	Died of Septicæmia which was present before the operation.
" " toe ...	4		
" " thumb ...	1		
3. <i>Operations on Bones :—</i>			
(a) Excision of fragments of bones for caries and necrosis.			
Acromial end of clavicle	1		
Humerus	1		
Radius	3		
Hand	2		
Turbinated bones and Vomer ...	1		
Femur	5	1	Died of extensive Osteo-myelitis.
Tibia	4		
Fibula	1		
Vertebræ for Pott's disease	3	1	
(b) Wiring of fragments of fracture of ulna	1		
(c) Removal of fragments of fractured bones :			
Radius and ulna ...	1		
Lower Jaw	1		
(d) Reduction of Colle's fracture	3		
4. <i>Operations on joints :—</i>			
Aspiration of knee	1		
Reduction of dislocations :			
Shoulder	2		
Wrist	1		
Breaking of adhesions in knee	1		
Carried over ...	66	3	

	Cases.	Deaths.	Remarks.
Brought forward .	66	3	
5. <i>Operations on muscles and tendons</i> :—			
Suturing of tendons of hand.	1		
6. <i>Operations on the eye</i> :—			
Cataract	33		
Incision of cornea for ulcer...	1		
Iridectomy for glaucoma ...	2		
Iridectomy for corneal opacity	2		
Excision of eye-ball ...	6		
Transplantation for Pterygium	3		
Paracentesis of cornea for hypopion	3		
7. <i>Operations on the ear</i> :—			
Trephining of mastoid cells for suppurative mastoiditis	6		
8. <i>Operations on the head and face</i> :—			
Closing fistula of frontal Sinus	1		
Extraction of teeth... ..	6		
9. <i>Operations on chest</i> :—			
Tapping of chest for fluid ...	3		
Scraping of fistulous abscess of chest	1		
Empyæma	3	1	Case of Liver abscess which had burst into the lung and pleural cavity.
10. <i>Operations on Abdominal cavity</i> :—			
Paracentesis for ascites ...	26		
Radical cure of inguinal hernia ...	3		
„ umbidical hernia ...	1		
„ femoral hernia ...	1	1	Patient, an old weakly lady of 72, died of asthenia one week after operation.
Incision of hæmatoma of abdominal wall	1		
Incision for suppurative appendicitis... ..	1		
Anterior Gastro-Enterostomy	1		
Gastrostomy	1	1	Died of shock.
Repair of abdominal wall for non-union	1		
Operation for Liver abscess	10	4	
Exploration for Liver abscess	3		
Perigastric abscess	1	1	Described in Appendix.
11. <i>Operation on Rectum and anus</i> :—			
Fistula in ano	4		
Dilatation of anus for fissure	2		
Operations for piles ...	5		
Carried over ...	198	11	

	Cases.	Deaths.	Remarks.
Brought forward ...	198	11	
12. <i>Operations on Urinary Organs :—</i>			
Supra-pubic cystotomy for vesical calculus ...	3		
Extraction of urethral calculi ...	2		
External urethrotomy for urethral fistulæ ...	2		
Internal urethrotomy ...	1		
Urinary fistulæ ...	10		
Urethroplasty ...	1		
Dilatation and catheterisation for urethral stricture.	10		
13. <i>Operations on male generative organs :—</i>			
Circumcision ...	26		
Tapping for hydrocele ...	13		
„ hæmatocele ...	3		
Radical cure of hydrocele...	8		
Operation for suppurative orchitis ...	4		
14. <i>Operations on female generative organs :—</i>			
Curettage of uterine cavity	4		
Ovariectomy ...	1		
Salpingectomy ...	2	1	Described in Appendix.
Colpo-perineorrhaphy ...	2		
15. <i>Operations on arteries and veins :—</i>			
Excision of varicose veins...	1		
16. <i>Operations on Lymphatic Glands :—</i>			
Excision of femoro-inguinal glands ...	2		
Scraping of suppurating glands ...	1		
17. <i>Operations on skin and subcutaneous tissue :—</i>			
Excision of boils of back ...	2		
Incision of whitlow ...	6		
Scraping of Phagedænic ulcer of groin ...	1		
Scarification for gangrene of foot ...	3		
Scarification for cellulitis of foot ...	4		
Incisions and scraping of sinus of knee ...	1		
Carried over ...	311	12	

	Cases.	Deaths.	Remarks.
Brought forward...	311	12	
<i>Operations on skin, &c.—(Contd).</i>			
Incision and scraping of sinus of arm ...	3		
Incision for suppurative Lymphangitis of arm ...	2		
Incision of gangrene of scrotum...	5		
„ of arm and hand ...	3		
„ of mouth ...	1		
„ of Erysipelas of foot.	2		
„ Hæmatoma of foot..	1		
„ Septic wound of leg and foot ...	9		
„ Phlegmonous cellulitis of leg ...	2		
„ Fistula of leg ...	1		
„ of Tendo-synovitis of hand ...	1		
Excision of condylomata ...	1		
„ of warts on hand ...	1		
18. <i>Evacuation of abscesses :—</i>			
(a) <i>Head and neck :</i>			
Thyroid ...	1		
Parotidian ...	3		
Sub-temporal ...	3		
Scalp ...	2		
Facial ...	7		
Neck ...	8		
Peri-Tonsillar ...	1		
Mastoidian ...	2		
(b) <i>Thorax :</i>			
Pectoral ...	3		
Mammary ...	7		
(c) <i>Abdominal wall :</i>	7	1	Case of multiple abscesses with Septicæmia.
(d) <i>Upper extremities :</i>			
Abcess of arm ...	17		
„ of hand ...	14		
Axillary abscesses ...	10		
(e) <i>Lower Extremities :</i>			
Gluteal ...	13	1	
Thigh ...	29		
Leg ...	33		
Foot ...	32		
Knee ...	2		
Inguinal ...	36		
(f) <i>Generative organs...</i>	25		
(g) <i>Psoas-Iliac abscess</i> ...	5	1	
(h) <i>Perineal and ischio rectal..</i>	24		
(i) <i>Sacral</i> ...	5		
(k) <i>Diffuse Suppurative Cellulitis</i> ...	6		
(l) <i>Sinuses</i> ...	3		
19. <i>Removal of foreign bodies</i> ...	2		
20. <i>Suturing of wounds...</i>	3		
	646	15	

(b) As can be seen from the above returns, the surgical work done in 1907 was by far more extensive than in previous years. Nearly half of the operations performed were for abscesses in various regions of the body, some of which were attended by severe constitutional disturbances. There were however only two deaths that could be attributed to abscesses, viz : one from diffuse suppurative cellulitis of the abdominal wall complicated by Septicœmia and the other from Psoas Abscess. In the latter case, the patient was a very weakly lad of about 12 who died 24 hours after the operation.

(c) *Mastoiditis*. Trephining of the mastoid cells for suppurative mastoiditis was done in 6 cases, in 3 of which the disease was a sequel of Influenza. All the cases rapidly recovered after the operation.

(d) *Liver Abscess*. There were ten operations for abscess of the liver with only 4 deaths. This result is one of the best ever obtained, seeing that nearly all the patients were admitted in a precarious condition. In one of the fatal cases, the patient had multiple abscesses. The other three cases were associated with chronic Dysentery.

(e) Clinical notes of the most interesting operations done during the year are given in the Appendix.

Return of Injuries.

21. TABLE XXIII.

Injuries.	Cases.	Deaths	Remarks.
(a) <i>General</i> :			
Burns	7	4	
Shock from drowning ...	1		
(b) <i>Local</i> :			
Burns and scalds	4		
Bruise	58		
Wounds	171		
Sprain	19		
<i>Dislocation of</i> :			
Humerus	3		
Radius and Ulna	1		
Hip	1		
<i>Fracture of</i> :			
Humerus	7		
Radius and Ulna	7		
Radius (Colles')	7		
Metacarpal	1		
Phalanx	4		
Ribs	1		
Spine	2	1	
Femur	10		
Patella	1		
Tibia... ..	2		
Nasal bones... ..	1		
Malar bone	1		
Gun-shot wound... ..	3		
Foreign body in hand	3		
Concussion of brain	1	1	1 suicidal, 1 homicidal and 1 accidental.
	316	6	

The following is a summary of the work done in the Laboratory of this hospital in the course of the year :—

A.—BACTERIOLOGICAL.

Specimens examined.	Nature of researches.	No.
1 Sputum	Plague bacillus ...	3
Smear preparations from spleen and buboes P. M.	„ ...	3
2 Blood from suspected case of Typhoid Fever	Widal's Test ...	31
3 Blood from suspected case of para typhoid	Agglutination Test..	2
4 Sputum	Tubercle Bacillus...	304
5 Urethral discharge	Gonococcus ...	11
6 Swabbings from throat and nose	Diphtheria bacillus.	23
7 Blood films	Malaria parasites ..	21
8 „	Filaria ...	4
9 Blood of bovidæ and equidæ ...	Trypanosoma ...	5
10 Stools	Ankylostoma and other intestinal parasites ...	60
11 Urine sediment	Bilharzia ...	9
12 „ „	Gonococcus ...	10

B.—NON-BACTERIOLOGICAL.

1. Microscopical examination of sections of pathological tissues 3
2. Enumeration of red blood corpuscles 2
3. „ of white blood corpuscles 7
4. Quantitative analysis of urine and microscopical examination of urinic sediment 20
5. Radiographs 33

The importance of the Bacteriological work done in this Laboratory ceased from the 1st. of September when the Laboratory at Moka was opened and the greater part of the hospital bacteriological plant transferred to “La Malmaison,” only a microscope and the necessary stains and slides being left for ordinary clinical work.

On Mr. Maya being appointed Assistant Director to the New Bacteriological Laboratory, his successor Mr. Lebrasse, took up the management of our clinical Laboratory, and I am glad to say that he has been doing his best ever since to put it on an efficient footing. The X ray apparatus successfully worked by Mr. Lebrasse, has continued to prove very useful not only to the Civil Hospital but to the general public. A dark movable cabinet having been provided, it has since been possible to make radiosopic examinations and this means has been resorted to for diagnostic purposes in many cases.

APPENDIX.

CLINICAL OBSERVATIONS.

1. *Case of Calcareous deposits in the Spleen.*

P. C. aged 40, was admitted to the Civil Hospital with profound cachexia and jaundice. The abdomen was enormously distended, the superficial veins standing out prominently, and the lower extremities were oedematous. Patient gave a history of alcoholism and of repeated attacks of Malarial Fever. The abdomen was tender to the touch, but the spleen could easily be made out on palpation. Ascites being present, the abdomen was tapped twice to relieve tension, but only small quantities of liquid were drawn off each time. On the second occasion, the liquid was turbid and contained pus corpuscles. Patient died twelve days after admission.

P.M. appearances.—Liver cirrhotic. There was chronic general peritonitis, causing adhesions of the small and large intestines to the parietal peritoneum, thus creating loculi which contained turbid liquid, and explained the small quantities drained off by tapping. Kidneys cirrhotic and cystic, capsules thickened and peeling with difficulty.

Spleen greatly enlarged, kidney shaped and hard to the touch. The anterior surface was comparatively smooth. The posterior surface, especially to the left of the hilum, showed a long irregularity shaped area, where the capsule looked as if it had been calcified. To that part, the transverse colon was firmly attached by means of old adhesions. On the anterior border there was, imbedded in the thickened capsule, a peculiar T shaped substance looking exactly like a piece of bone.

On section, the spleen pulp was dark coloured and hard. There was considerable increase of fibrous tissue, the vessel walls were calcified, and sharp—cutting spicules could be felt by passing the hand over the cut surfaces. In contrast with the advanced degree of calcification in the small vessels of the spleen pulp, there were only one or two patches of commencing atheroma in the aorta, but none in the splenic artery. The specimen was presented to Professor Ross.

2. *An extreme case of Gout—Death.*

This case deserves special mention on account of its rarity. K. W., a Chinaman born in Mauritius, aged 59 and a shopkeeper by trade, was admitted on the 22nd. of April entirely disabled by painful swellings over the articulations of the hands and feet.

With a good deal of difficulty, the following history was elicited. Patient came to Mauritius 3 years ago from Tamatave where he had spent 7 years. He never had syphilis, but has always had sedentary habits and was fond of rum and wine. His food in Tamatave consisted in beef every day, fish very frequently and Saïgon rice. The disease started in the right foot about 7 years ago, while he was in Tamatave, the ankle being first affected and subsequently the toes. For two years, the right foot only was affected. The disease then spread to the right hand, commencing in the thumb and then involving the fingers. The swellings at first small and very painful, gradually increased in size. Four years ago, similar swellings appeared in the left foot, first in the big toe then spreading to the other toes. Shortly after, the left hand became similarly

affected. When he came to Mauritius, three years ago, he was suffering from both extremities, but not to the same extent as at present. He could then walk a little, though with difficulty ; but he gradually grew from bad to worse, so as to be now completely crippled.

On admission, patient presents the remarkable condition shown in the photographs. Both hands and feet are completely deformed by more or less lobulated swellings over the dorsal aspect of the articulations of the fingers and toes. Similar but larger swellings are seen besides in the right foot, over both malleoli, the back of the heel and the sole ; in the left foot, over the back and inner aspect of the heel and along the outer aspect of the metatarsus. In the right hand, the swellings over the metacarpo-phalangeal articulations of the middle finger and thumb are the biggest. In the left hand the ring and the little fingers are free from any swellings, but are stiff. Both wrists are likewise free from any appreciable lesions.

These swellings are painful to the touch and vary in size from a marble to a mandarine. They have a soft doughy like consistence but show no fluctuation. The skin over these tumours is very thin and glossy, almost translucent, as if pellucid and ready to burst. Here and there, whitish patches, evidently forming part of the contents, can be seen through. On the back of the elbow, over the olecranon and upper fifth of the ulna, there is a large cystic swelling of about the size of an orange, containing hard lumps that can be distinctly felt. Over both shins there are small subcutaneous nodules feeling like shot, and in the lobule of the left ear, a similar nodule of about the size of a lentil can be felt. The articulation of the hips, knees, shoulders and elbows are free from any external signs of disease.

The movements of the arms and legs, at the elbows and knees, however, are impaired, not so at the shoulders and hips. Patient besides, presents marked signs of arterio-sclerosis with a high tension pulse, profound anæmia and asthenia. The spleen is not enlarged and the liver and intestines show nothing abnormal. The urine has no sediment and contains neither albumen nor sugar, nor any trace of free uric acid or urates. From the 3rd. of May, his condition grew worse. Fever set in and on the 5th. he fell into a comatose state which persisted till his death, which took place on the following day, his pulse maintaining its high tension to the last.

On P.M. examination, the following points were made out. The swellings on the hands and feet were found to contain chalky deposits of a whitish colour, which were proved on chemical and microscopical examination to consist mainly of uric acid. The swelling over the back of the elbow was nothing else but the bursa over the olecranon, enormously distended with a thick white creamy substance in which were imbedded chalk like concretions of uric acid. The cartilages of the articulations of the hands and feet were covered with similar deposits. In some joints, the cartilage was ulcerated, while in the right foot the first metatarsal and phalanx of the big toe were to a large extent destroyed and replaced by chalky infiltrations so that the metacarpo-phalangeal articulation was represented by a calcareous looking mass.

The subcutaneous deposits were likewise found to be tophi. The meningeal cavities and ventricles contained more cerebro-spinal fluid than usual. Over the left occipital lobe, the pia mater presented a whitish patch in which on microscopical examination uric acid crystals were discovered. The cerebro-spinal fluid was also found on evaporation to contain uric acid. The heart

was somewhat hypertrophied, especially the left ventricle; the valves were normal and the aorta showed no signs of atheroma. The lungs were pale and almost bloodless and were studded over both externally and internally on section 1; with black granules looking like particles of coal. It was not possible unfortunately, to ascertain whether the patient had formerly worked in a coal mine. The liver weighed 1.570 grammes and presented the nutmeg appearance. The spleen was of moderate size. The kidneys weighed respectively 125 and 115 grammes. They were slightly contracted and somewhat granular, but showed nothing very typical.

This case is interesting as affording a remarkable instance of exceptionally extensive gouty manifestations. Unfortunately, only imperfect information could be obtained as to the mode of origin and spread of the disease. It was in fact an extreme case of uric acid deposits.

3. *Treatment of certain Surgical cases by Bier's Method.*

(1) During my stay in Paris in 1906, I had the advantage of attending practical demonstrations given by Tuffier, the great French Surgeon, on Bier's treatment of surgical cases by passive congestion and of witnessing the excellent results of this method on a variety of cases. Since my return from leave, I have tried Bier's method on a number of cases and am glad to report equally satisfactory results. As is well known, the passive hyperæmia is obtained usually in two ways:—1o. by suction, by means of cupping glasses and 2o. by constriction, by means of the elastic ligature.

Hyperæmia by suction:—Thanks to Dr. V. Rohan, who kindly lent me his set of cupping glasses, exhausted by the air pump, I was able to try suction in the following cases:—

Carbuncles	...	...	...	4 cases
Mammary abscess	...	...	...	10 „
Liver abscess	...	...	...	3 „

1o. *Carbuncles*:—In no case was the usual crucial incision made. In fact, the knife was not used at all. Suction was applied twice a day after the prescribed technique and no antiseptic of any sort was resorted to during the whole treatment; the dressing consisting simply in an aseptic compress. Under this treatment, the hard swelling grew gradually smaller and finally disappeared, leaving a small healthy looking ulcer which rapidly healed. Furuncles dried up in 3 or 4 days with cupping.

2o. *Mammary abscess*:—The result of cupping on mammary abscesses was remarkable indeed in every case. The following are notes of the most interesting cases:—

Case 1.—X aged 25, admitted on 16th. August 1907 with a large fluctuating abscess of left breast. A small puncture is made to give egress to pus, and cupping is applied twice a day for four days, then once a day for one week. No antiseptic, but only a compress of sterilized lint used for dressing. Abscess completely cured in a fortnight, lactation returned perfectly well, patient discharged on 2nd. September 1907.

Case 2.—X aged 38, suckling a baby two months old, admitted on 3rd. September 1907 with a large loculated abscess of the left breast; nearly the whole of the breast is involved. An incision had

been made previous to admission. Nevertheless, the breast looks very much inflamed and is very painful. Cupping treatment was applied at once, but the glasses being too small for the size of the abscess, a second puncture had to be made subsequently. No antiseptic was used, the dressing being purely aseptic. Patient discharged on the 18th. of September completely cured, lactation having completely returned in the diseased breast.

Case 3.—X aged 20, had a ten months old baby who died on the 20th. of October.

From that day the breast became inflamed and swollen. Patient was admitted on the 13th. of November with a breast considerably swollen, red, hard and very painful. The local inflammation was attended by severe constitutional symptoms. Cupping was applied at once and continued twice a day.

November 15th. Fluctuation being present above nipple, a small puncture is made and cupping continued over the incision. Immediate relief is experienced.

November 21st. Hardness is felt below nipple owing to a second abscess forming. Cupping is applied over this swelling.

December 7th. Fluctuation being present, another puncture is made into this second abscess and cupping continued. From that day the improvement was rapid.

December 12th. Abscess completely healed. The last applications withdrew only pure milk from the nipple, showing that lactation had returned.

December 21st. Patient discharged completely cured.

Case 4.—X aged 28, admitted on the 14th. of October with an abscess of the breast which had burst, the opening, a mere puncture, being surrounded by Eczema. Cupping applied for three days and aseptic dressing used. Abscess dried up and patient was discharged cured on the 21st. of October.

Case 5.—X aged 15, Brightic, admitted on 5th. of October, with abscess of right breast. Small puncture made and cupping applied from that date to the 14th. Abscess rapidly dried up, lactation returned and patient was discharged completely cured on the 14th.

Case 6.—X aged 20, admitted on the 17th. of September with abscess of right breast. Cupping began at once. September 19th., fluctuation being well marked, a puncture is made and pus allowed to escape. Cupping applied twice a day till the first of October, then once a day to the 7th. Patient discharged completely cured on the 10th. of October.

Case 7.—X aged 23, admitted on the 29th. October 1907 with abscess of left breast. Cupping was begun on the following day. No puncture was made, the abscess burst of itself through a small opening of the size of a pea. Cupping was continued regularly and patient was discharged on the 19th. at her own request, abscess cavity being closed and almost completely healed up.

These results are indeed very striking. To be able to give the full credit thereof to the method, the least possible opening,

in fact a mere puncture, was made in every case into the abscess cavity when fluctuation was present, and no antiseptic at all was used during the whole treatment, the dressing being purely aseptic. The first effect of the treatment was the diminution of pain and the consequent relief to the patient. The first application was usually painful but never the subsequent ones. The temperature rapidly subsided even in the most severe cases and the healing and closing up of the abscess cavity was in every case very rapid. What is still more remarkable, even in the cases where the destruction of the mammary gland was apparently considerable, lactation returned.

Case No. 3 was the one which showed most conspicuously the value of the treatment. The whole breast was inflamed and honeycombed with abscesses which would have necessitated free incisions, counter openings, the destruction of loculi with the fingers, and the use of powerful antiseptics, in fact a surgical interference under an anæsthetic and complicated dressings. Moreover, the resulting sore would have been such as to take more than two months to heal and it is doubtful whether lactation would have readily returned. With the method applied, the surgical interference consisted in two small punctures and the dressing in simple sterilized compresses.

The patient was completely cured with a return of lactation in five weeks. I believe that healing would have been more rapid, if suction could have been applied to the whole breast at a time with a suitable instrument such as is used by Bier. As a matter of fact we used ordinary cupping glasses. It is to be hoped that this hospital will soon be provided with the set of glasses required for such purposes.

I had unfortunately no opportunity of trying suction in cases of Acute Mastitis, before suppuration had set in. In all the cases so treated, suppuration had commenced or was already advanced. One of the advantages claimed for this method is the prevention of suppuration and the rapid relief of inflammation. In the case of abscesses already formed, suction acted not only in completely emptying the abscess cavity but also in producing a certain degree of passive congestion.

30. *Liver Abscess.* The encouraging results obtained in mammary abscesses led me to try Bier's method in an extreme case of liver abscess. As it is I believe the first case of this nature, at least in Mauritius, treated by this method, the following abstract of the case may prove interesting.

Patient, a young man of 20 years of age, is sent from Médine Estate to the Civil Hospital on the 27th. of September, with a large abscess of the liver, pointing in the right hypochondriac region in the mid axillary line. Patient on admission is extremely pale and weak. He is emaciated and slightly jaundiced, and the pulse is very rapid and almost imperceptible. The operation, made on the following morning, consisted in an incision in the seventh intercostal space, large enough to admit three fingers. A great quantity of pus escaped, at first fluid, and chocolate coloured, then very thick, creamy and yellowish green. Two rubber tubes of about the size of a thumb were introduced into the abscess cavity, but the pus that was still remaining in the cavity was so thick, that it could not drain out. A cupping glass was applied over the openings, and after exhaustion with the air pump, the pus welled out. The cupping was applied four times

on that occasion and by this means a large quantity of very thick, viscid pus was evacuated. As in the case of mammary abscesses, the dressing was purely aseptic. After the operation, patient was very weak and could hardly speak. His respiration was laboured and his temperature fell below normal. He was in fact almost in a moribund condition, and great anxiety was felt for the night. Saline infusion and strychnine were administered.

September 29th. Patient spent a very bad night and is still very weak. Temperature 37.8° last night and 37° this morning, the dressing contained comparatively little pus. Cupping applied over the opening of the abscess in the morning and in the afternoon, and on each occasion a large quantity of very thick greenish pus was evacuated. At the end of the suction, the pus is tinged with blood.

September 30th. General condition still very precarious. Abdomen is tense, tympanitic and painful. Enema of Turpentine and asafetida administered, and cupping applied morning and afternoon, the same thick, creamy pus escaping each time. Temperature normal.

October 1st. Patient spent a sleepless night, but did not suffer much. He is still very weak, but there seems to be a slight improvement in his condition. Cupping continued morning and evening, still gives rise to much pain. The pus evacuated to-day is slightly thinner than on the preceding days.

October 2nd. Patient spent a fairly good night and slept 4 hours. Pulse is a little stronger to-day and general condition more satisfactory. Temperature normal, cupping applied morning and evening.

October 3rd. Improvement more marked. Cupping continued twice a day. Less pus is evacuated.

From that date, patient's condition improved more and more every day.

The cupping which was continued once a day from the 3rd. no longer caused pain. His temperature varied between $36^{\circ}.7$ and $37^{\circ}.2$, and his pulse became stronger and slower. As a larger quantity of pus than usual was sucked out on the 7th., two applications were made on that day as well as on the 8th.

On the 9th. and 10th., cupping was used only once a day. As the discharge was now thin and flowed freely, one of the tubes was removed and cupping was discontinued from the 10th. Patient's condition was then excellent, he had no fever and slept well, and his appetite had returned. On the 25th, the remaining tube was replaced by a smaller one, which was kept until the 11th. of November, from which date the abscess cavity being much reduced in size and the discharge insignificant, drainage was dispensed with altogether, and Iodoform gauze dressing used. Patient was discharged on the 23rd. of November completely cured. His health was then remarkably good. He had gained flesh considerably and was in the best of spirits.

I have not the least hesitation in attributing this successful result to the suction systematically applied. The patient was admitted almost in a dying state and the contents of the abscess were so thick and viscid that they could never have drained out by the tubes in the usual way, notwithstanding the fact that the

opening was in a dependent position. In fact, every day the dressing removed, contained much less pus than was evacuated by the suction. I have never before, in my experience, seen an advanced case of this nature recover. With the exception of the swabbing of the cutaneous opening with hydrogen peroxide, no antiseptic was used during the cupping treatment.

Cupping was also used in two cases of abscess of the left lobe of the liver incised in the epigastric region. Their situation rendered the drainage of pus very difficult, as the patients were unwilling to lie on their abdomen. Suction consequently hastened recovery in these two cases.

(2) *Hypercæmia by constriction*, was tried in six cases of Gonorrhœal Arthritis of the knee. In two cases only, however was I able to carry on the treatment for a time, and the result was excellent.

Case 1. Patient, a labourer of the Health Department had suppurative Arthritis of the knee, and had been under treatment at the Civil Hospital since the 28th. of May. He was transferred to the surgical ward under my charge at the end of June and on the 3rd. of July after aspiration of the knee, I began to apply the elastic bandage to the upper part of the thigh. The bandage was applied every day for ten hours until the 10th. The swelling of the knee gradually subsided, and in five weeks the patient was able to use his leg and return to his work. Such cases, as is well known, are usually very troublesome to deal with, and necessitate repeated applications of blisters or thermocautery.

Case 2. Patient admitted with Gonorrhœa, attended by ophthalmia and swelling of the right knee from hydrasthrosis. The right knee is about twice the size of the left. Elastic bandage applied every day for 10 hours at a time for one week. After the third application, the swelling was considerably reduced in size, and after the 7th. it almost completely disappeared. When the patient was discharged, his right knee differed only very slightly from the left.

In the remaining cases, no improvement or only a partial cure, was obtained, as the patients either removed the bandage as soon as it was applied or objected to its use after two or three days, notwithstanding the diminution of pain felt.

4. *Supra-pubic Cystotomy* for stone in the bladder was successfully performed in three cases. In one case the stone weighed as much as 47 grammes. It had given considerable distress to the patient and had incapacitated him from work for months before the operation. He left hospital completely cured and resumed his work as a cabinet-maker soon after his discharge.

5. *Radical cure of Hernia* was made in five cases, viz :—
 3 for Inguinal Hernia.
 1 for Umbilical Hernia.
 1 for Femoral Hernia.

The last mentioned case was that of an old lady of 72 years of age, admitted on the 3rd. of May in an emaciated and debilitated condition with a Femoral Hernia, which had been strangulated three days before admission. Herniotomy was at once performed and the radical cure attempted. The intestinal loop was of a livid hue, but was not gangrenous. The bowels only

moved on the 3rd. day, after three 2 grain-doses of Calomel. In spite of the excellent aspect of the wound which healed by first intention, the patient who had suffered a good deal from privation, for a long time before, gradually sank and died of asthenia on the 8th. day after the operation. I mention this case as being one of extremely rare occurrence in the practice of this hospital.

6. *Perigastric Abscess*; the result of perforating ulcer of stomach.

Patient, a weakly and emaciated woman of 50 years of age, was admitted on the 24th. of September suffering from a large phlegmonous swelling occupying the left hypochondriac region and extending downwards as far as the iliac crest and to the right as far as the navel. Upon fluctuation being felt at a spot about 3 inches to the left of the navel, patient was operated under chloroform. The abscess cavity was of about the size of a peach. It lay in the centre of a large phlegmon, occupying the left side of the abdominal cavity, and as the floor appeared to me to be a piece of splenic capsule covered with inflammatory deposits, the diagnosis of perisplenic abscess was made. Patient's condition improved for a few days after the operation. The phlegmon gradually diminished in size, and she was, to all appearances, rapidly rallying, when one morning particles of milk curds were found in the dressing. From that day, her state grew worse. She continued to pass by the abscess opening an acrid and strongly smelling fluid containing pieces of curd, a clear indication of a gastric fistula. She died four days after. On P. M. examination, the abscess was found to be peri-gastric and peri-hepatic and not peri-splenic. The spleen had been entirely excluded from the phlegmonous mass, was only slightly enlarged and had been pushed backwards and upwards. The abscess communicated with the stomach by a fistulous track through the left lobe of the liver near its extremity. The gastric opening of the fistula was surrounded by an ulcer of about the size of a shilling and partly cicatrised, no doubt the primary cause of the whole mischief. The case was pathologically a most interesting one. It was practically a left anterior subphrenic abscess which was both perigastric and peri-hepatic.

7.—*Laparotomy* was performed in the following cases :—

a. Ovariectomy	...	...	...	1
b. Salpingectomy for Pyosalpinx...	...	...	...	2
c. Gastro-enterostomy	...	...	...	1
d. Gastrostomy	...	...	...	1

(a) *Ovariectomy* for Dermoid Cyst of the ovary was successfully made by Dr. de Chazal before my return from leave. Patient, I understand, made an uneventful recovery.

(b) *Salpingectomy* was performed in two cases of pyosalpinx. One of the patients recovered and the other died four days after the operation from pelvic Peritonitis, as confirmed by P.M. examination. The abscess which was of about the size of a small orange burst in the process of removal, and in spite of the free use of compresses, the peritoneum did not escape contamination.

(c) The most interesting operation of the year was an *anterior Gastro-Enterostomy* for cancerous stricture of the Pylorus.

The notes on the case are as follows :—

Indian woman, aged 50, admitted on the 10th. of July with painful distention of the stomach attended by constipation alternating with diarrhoea, anæmia, debility and emaciation.

Previous History. Patient was very well until 1898, when she suffered from dysentery, which, from want of proper treatment assumed a chronic character and lasted 18 months. She never entirely recovered from its effects and ever since has been suffering off and on from pain in the epigastrium, flatulence and intestinal irritation. At the beginning of 1907, she began to suffer from distention in the epigastrium and from vomiting of indigested food. From that time, she lost her appetite and became rapidly emaciated. Her condition grew gradually worse and since two months she can take food only in small quantity at a time. After each meal, her stomach is distended; she is oppressed and is frequently seized with nausea followed by eructations. She never vomited blood and never suffered from melæna.

State on Admission. Advanced Cachexia and extreme emaciation. Pulse thready, urine has no sugar nor albumen. On inspection and palpation, dilatation of the stomach can readily be made out, projecting at the epigastrium and extending downwards as far as the navel and to the left over the splenic region. At the region of the Pylorus, a hard swelling can distinctly be felt, deeply situated in the abdominal cavity.

Diagnosis: Cancerous stricture of the Pylorus causing dilatation of the stomach.

Treatment. After a few day's observation during which the patient was stimulated and fed with liquid nourishment, the stomach was washed with a 1 in 500 solution of Bicarbonate of Soda, every day for a week. During the first five days, patient experienced great relief and could sleep a few hours at night. At the end of the week however, the washing had to be stopped at the request of the patient whose sufferings ultimately became so intolerable that she consented to submit to any surgical interference, however risky. I resolved to attempt a Gastro-enterostomy and on the 24th. of August I performed the operation with the assistance of Drs. de Chazal, Monty and Crétin. The operation contemplated was a Posterior-Gastro-enterostomy, but this had to be given up in presence of the extensive adhesions of the mesocolon, which rendered it impossible to reflect the great omentum upwards and expose the posterior surface of the stomach. In this mass of adhesions were unbedded hard nodular swellings apparently enlarged mesenteric glands. An anterior-gastro-enterostomy had therefore to be resorted to. Before proceeding with the operation, I made a rapid exploration of the pylorus which was found hard and bound down by adhesions.

Thanks to the invaluable assistance of my colleagues, the operation could be conducted without much difficulty. The gastro-intestinal sutures were made in the usual way, with ordinary dress-maker's needle and linen thread. The suturing of the abdominal wall gave rise to a good deal of trouble and took considerable time, owing to the emaciated condition of the patient which rendered the exact apposition of the edges of the cutaneous wound almost impossible.

No drainage tube was used and the dressing was purely

aseptic. The operation lasted 2 hours and a quarter, and the patient took $2\frac{1}{2}$ oz. of chloroform.

Post operative progress of the case:—The patient bore the shock of this long operation remarkably well and rallied much more rapidly than was anticipated. For 18 hours she took absolutely nothing by the mouth and was only given two enemata of normal saline solution, which quenched her thirst.

On the 25th. she was allowed to suck pieces of ice and drink now and then a tea-spoonful of sterilized water, the saline enemata being continued with 10 minims of liquor strychnine added.

On the 26th. she was given condensed milk by tea-spoonfuls every hour and was besides fed with nutrient enemata, alternately with saline enemata.

From that date the quantity of milk, fresh and condensed, was gradually increased and saline and nutrient enemata continued to be administered until the 29th. (five days after the operation), when the enemata were stopped and the patient fed on chicken broth and yolks of eggs beaten up in milk. This regimen continued until the 4th. day of September, was readily digested without nausea or vomiting. The patient was then much stronger and would have been very well, were it not for some flatulence. The temperature, with the exception of a slight rise on the 25th. and 26th. had been normal or slightly subnormal and the pulse had grown gradually stronger and slower.

Patient passed her first stool in the evening of the 27th., it was soft and pale. Subsequent stools became gradually darker and finally normal in appearance.

September 4. Following diet prescribed:—Four eggs (soft boiled), chicken soup, beeftea, chocolate.

Patient's weight:— $70\frac{1}{2}$ lbs.

September 5th. Abdominal sutures examined. There is non-union of the cutaneous wound from inversion of the edges of the skin. To remedy this, a plastic operation was made on the following day. It was long and tedious but did not affect patient's condition.

From that day the improvement became more and more marked. The appetite kept good and the strength gradually returned.

September 16th. Diet prescribed:—

Roast fowl, rice, eggs, beeftea, chocolate, lentils.

September 19th. Abdominal sutures removed. Union perfect except at upper part to the extent of about $\frac{1}{3}$ of an inch.

Weight:— 74 lbs. Gain in a fortnight:— $3\frac{1}{2}$ lbs.

September 25th. Abdominal wound completely cicatrised, patient allowed to walk with an abdominal bandage on.

September 27th. Diet:—Beef, fish, rice, bread, chocolate

and Pontac wine.—September 28th. Weight : 79 lbs. Gain since 19th. 5 lbs.

September 30th. Patient complains of indigestion attended by flatulence, no doubt, the result of overfeeding. On her food being reduced, she quickly recovered. Patient discharged at her request on the 8th. of October. On the day of her discharge she weighed 80 lbs. and had gained 10 lbs. in 4 weeks. The gastric dilatation had disappeared completely but the region of the Pylorus was still sensible to touch and presented a marked induration. The union of the abdominal wall was perfect but for safety, an abdominal bandage was considered necessary. She walked all the way from the hospital to the Railway Station where she took the train on the same day for Black River. She has unfortunately not been heard of since.

The interest of this case lies in the fact that the gastro-intestinal anastomosis, successfully established without vicious circle, allowed solid food to pass in less than a fortnight after the operation and resulted in rapid improvement in the patient's condition, as evidenced by the progressive increase in her weight. In fact, the aims of the operation, viz: the relief of considerable sufferings and the prolongation of life, were attained and for this reason, coupled with its first occurrence in this hospital, the case appears to me worthy of a special mention.

Gastrostomy.—Gastrostomy was performed for cicatricial stricture of the œsophagus of several months standing, the result of accidental swallow of Nitric Acid. The patient was admitted in a state of extreme emaciation having not been able to take any food for 10 days, before the operation. He was fed per rectum at once and repeated attempts were made to pass the œsophageal sound. As these failed, gastrostomy was performed and liquid food introduced by means of a catheter. The patient however was too weak, to overcome the shock of the operation and he died 20 hours after.

A propos of œsophageal stricture, a case of spasmodic stricture of one week's duration came under notice. A radiosopic examination was made when a Bismuth cachet was distinctly seen stopped a little above the level of the sternal notch. The patient was cured by suggestion, on being informed that if he could not swallow on the following morning, his stomach would have to be opened.

8. *Obstetrical Observations.*

A. *Eclampsia*.— 2 cases.

(a) *Post partum eclampsia*.—The patient was admitted with marked anæmia, general anasarca, and albumen in the urine. Labour set in eleven days after admission, and was quite normal. About two hours after the birth of the child, eclamptic fits began, rapid in succession and very severe. She died 12 hours after the onset of the fits.

(b) *Eclampsia at 4th. month of Pregnancy*.—The patient was admitted at the 4th. month of pregnancy with anæmia, anasarca and albuminuria. On the day following admission, she developed eclampsia, and had several fits in succession. Chloral and hypodermic injections of morphia were administered with no result, the patient losing consciousness, and the fits becoming more frequent, although shorter in duration. Fifteen hours

after the onset of the fits, labour pains set in, resulting in abortion. The placenta being adherent, was detached manually, and the uterine cavity douched. Some degree of shock attended the birth of the foetus, and the patient died four hours afterwards.

B. Contracted Rickety Pelvis—Embryotomy.—Gangrene of maternal passages.—Death.

The patient, a primipara, is a small dwarfish woman of 20, specially short from the waist downwards. There is nothing special to note about the structure of the trunk, it is fairly well developed. The femurs are markedly shortened, and their normal curve greatly accentuated. The bones of the legs are likewise much shortened, and show a well marked antero-posterior curve in the lower third of the tibiae. The head has the characteristics of a rickety one; it is long and square, with the forehead standing out more or less vertically in front and at the sides, and the top is distinctly flattened. The general health is bad, there is evidence of pronounced anæmia, the spleen is enlarged. On admission the patient complains of pains in the lower abdomen, coming and going like labour pains. The pains are not very strong, and there is a foetid discharge coming from the vagina. Palpation of the abdomen reveals a head presentation, but no movements on the part of the child. On auscultation, the sounds of the foetal heart cannot be made out. In fact, the palpation and auscultation of the abdomen tended to show that the foetus was dead *in utero*. The examination *per vaginam* reveals a slightly dilated external os, about the size of a rupee. The membranes are ruptured. She is given a hot bath, a warm vaginal douche and sedatives for the night. The next morning, a P. V. examination showed the external os to be fully dilated, the foetal head being well moulded and engaged.

Cæsarean section was first contemplated, but had to be given up, on account of the foetid discharge that escaped from the passages, which gave the impression that the child was in a state of decomposition. Besides, on rough pelvimetry being practised with the fingers, it was found that the diameters were not contracted to such an extent as to contra-indicate the use of forceps. Consequently, she was put under chloroform and forceps were applied, but failed to deliver the head.

Embryotomy was then decided upon, as the next best course to follow, and a macerated and decomposed full-term foetus was delivered. Shock was not nearly so pronounced as might have been expected, from the nature of the manipulations and the length of chloroform administration. The patient lived 4 days after the operation. She was treated with uterine and vaginal douching and swabbings of the vagina with Peroxide of Hydrogen. Stimulants were freely administered. Fever began on the 2nd. day after operation, and rose to 39 ° c. and over on the 3rd. and 4th. days. Delirium set in on the 3rd. day, and the patient died comatose on the 4th. day, from gangrene of nearly the whole of the lacerated maternal passages.

C. Footling Presentation.

One case occurred during the year. The patient being a primipara. The body of the child was delivered with comparative ease, as far as the shoulders. The delivery of the head

was rendered difficult by the fact, that the arms were extended above the head, and that the uterus had contracted firmly on it. The arms were first disengaged, and forceps applied on the after coming head.

The delivery of the head being attended by extensive laceration of the perineum, which was at once repaired. The child was born asphyxiated, and never recovered, in spite of prolonged and repeated attempts at artificial respiration.

D. *Quadruplets.*

Patient R. D. aged 22, primi para, nine months pregnant. Admitted under the care of Dr. Sinnatambou, late Assistant Medical Superintendent, on the 1st. of April 1907, complaining of palpitation, shortness of breath, and inability to walk. She is very anæmic and shows signs of dropsy and general œdema. The urine contains a considerable quantity of albumen.

On the 4th. of April she is seized with fever and on the 5th. labour pains set in, accompanied by headache and dimness of vision. Early that same afternoon, the bag of membranes ruptured, followed by the birth of a dead child.

That child had apparently been dead two or three days. Immediately after the birth of that first child, a second bag of membranes ruptured, and a live child was born. Both children were females and fully developed. No sooner had the cord of the second child been tied, when a third bag of membranes ruptured containing two fetuses, which were expelled at one and the same time, with their common placenta and membranes. These two fetuses were very small, flattened and mummified. They weighed 260 and 277 grammes and measured 9 and 9½ inches respectively. They were both males, their sexual organs being fairly well developed. There were two placentas in all, and each of the four fetuses had a separate amniotic sac of its own, that is to say, to each placenta were attached two cords, entering it separately, and two amniotic sacs. On the 8th of April, three days after parturition the patient died.

The P. M. examination showed nothing abnormal as far as the uterus and its appendages were concerned.

E. *Abortions.*

Four cases came under treatment, two of which ended fatally, one of them being the case of eclampsia already referred to, the other death being attributed to intense anæmia, debility and shock.

The other two cases eventually did well. In both of them, the cause seems to have been anæmia, and repeated attacks of malarial fever.

F. A. ROUGET,
M.D. EDIN.

5th. March, 1908.

Medical Superintendent,
Civil Hospital.

ANNEXURE VIII.

Annual Report on the Lunatic Asylum for the year 1907.

I.—General Returns.

1. Number and classification of inmates in the Lunatic Asylum on 31st. December 1906.

		Europeans.	Creoles.	Indians.	Chinese.	Total.
Males	...	3	117	124	7	251
Females	...	...	114	59	...	173
Total	...	3	231	183	7	424*

* Including one female patient under observation, subsequently found to be sane.

2. The number and classification of inmates in the Asylum on 31st. December 1907.

		Europeans.	Creoles.	Indians.	Chinese.	Total.
Males	...	2	123	136	8	269
Females	...	...	107	59	...	166
Total	...	2	230	195	8	435†

† Including one male patient under observation.

Daily average of inmates in 1907 :—

Males	...	...	...	258.35
Females	...	...	...	172.49
Total	...	...	...	430.84

This shows an increase of 11.52 in the daily average over that of 1906 or 10.25 in the males and 1.27 in the females.

The greatest number of male patients confined at one time in the Asylum was 269 and that of females 177.

3. The criminal lunatics treated in the Asylum in 1907 was 31 (28 males and 3 females) or a percentage of 7.19 of the daily average.

Of this class of patients there were 10 males and 1 female

admitted during the year, 5 males and 1 female discharged by order of His Excellency the Governor, and 4 males, whose time of imprisonment had expired, transferred to the class of ordinary lunatics; leaving a remainder of 19 male and 2 female patients on 31st. December 1907.

4. The daily average of harmless imbeciles kept at the Barkly Asylum Lunatic Branch Wards, was :

Males	...	...	...	68.9
Females	...	...	...	49.7

5. General return of mental diseases, admissions and deaths in 1907 at the Lunatic Asylum :—

Mental diseases.	Remain- ing at end of 1906.	Yearly total.		Total cases treated.	Remain- ing at end of 1907.
		Admis- sions.	Deaths.		
Idiocy ...	13	8	1	21	15
Mania ...	215	88	16	303	224*
Melancholia ...	35	10	1	45	34
Dementia ...	116	2	4	118	113
Delusional In- sanity ...	44	6	1	50	48
Total ...	423	114	23	537	434
Admitted on In- terim order but (a) found sane by the Commis- sioners in Lu- nacy ...	1	4	...	5	...
(b) not yet re- ported upon by the Commission- ers in Lunacy (on 31.12.07) ...	...	1	...	1	1
Total ...	424	119	23	543	435

* Exclusive of the Chinaman Ah-Wen absconded and not yet recaptured.

6. The admissions in 1907 may be classified as follows :—

	Europeans.	Creoles.	Indians.	Chinese.	Total.
Males.	37	43	2	82
Females	18	19	...	37
Total	55	62	2	119

Showing a decrease of 7 in the female, but an increase of 1 in the male admissions on those of 1906.

70 (44 males and 26 females) were first admissions.

8 (7 males and 1 female) were second admissions.

4 males were third admissions.

1 male fourth and 1, ninth admission.

25 (16 males and 9 females) were re-admissions from probation.

5 males were re-admissions from the Barkly Asylum Lunatic Branch Wards, to which they had been transferred as harmless imbeciles.

4 males were found sane by the Commissioners in Lunacy.

1 male was still under observation on 31st. December 1907.

7. The Districts from which they were admitted were the following:—

Port Louis	...	...	...	...	...	...	30
Plaines Wilhems...	...	...	...	...	...	...	42
Flacq	...	...	...	...	...	...	13
Grand Port	...	...	...	...	...	...	5
Savanne	...	...	...	...	...	...	3
Moka	...	...	...	...	...	...	13
Black River	...	...	...	...	...	...	1
Rivière du Rempart	...	...	...	...	...	...	6
Pamplemousses	...	...	...	...	...	...	6
Total ...							119

8. The mental diseases of 63 of the admissions were attributed, as far as they could be ascertained, to the following causes:

Gunjah smoking	...	...	...	...	...	...	10
Drink	...	...	...	...	...	...	9
Malarial fever	...	...	...	...	...	...	8
Epilepsy	...	...	...	...	...	...	8
Heredity	...	...	...	...	...	...	6
Hysteria	...	...	...	...	...	...	7
Mental worry	...	...	...	...	...	...	6
Grief	...	...	...	...	...	...	3
Old age	...	...	...	...	...	...	2
Religious excitement	...	...	...	...	...	...	2
Puerperal state	...	...	...	...	...	...	1
Vicious habits	...	...	...	...	...	...	1
Total...							63

There is some satisfaction in stating that the cause of the insanity of a larger proportion of the admissions (18 more) was ascertained in 1907 than in the previous year, and it is to be hoped that greater trouble will be taken in future by the relatives and friends, and by the Police in some cases, in filling up the Schedule of Applicants supplied by the District Magistrates and that more definite information will be obtained therefrom to assign to each case its proper cause.

Gunjah smoking, drink, malarial fever and epilepsy headed the list of the ascertained causes, but malarial fever and privations have no doubt been contributing factors in the others.

Heredity appears also to be a frequent predisposing cause in this Colony, where consanguineous inter-marriages are not rare especially among the lower classes, but one most difficult to be admitted by the relatives. We have had mother and daughter as inmates of the Asylum at the same time on two or three occasions, and in one case almost every member of the same family.

9. The 85 discharges, or 3 more than in 1906, consisted of the following :--

	Europeans.	Creoles.	Indians.	Chinese.	Total.
Males ...	1	18	29	1	49
Females ...	...	22	14	...	36
Total...	1	40	43	1	85

10. They may be classified as follows :—

	Cured.	Relieved.	Not improved.	Total.
	Finally discharged.	Discharged on probation to the care of relatives or friends.	Transferred to the Barkly Asylum Lunatic Branch Wards.	
Males ...	10*	33	6	49
Females ...	4	28	4	36
Total...	14	61	10	85

* Including 5 males found by the Commissioners in Lunacy not to be insane at the time of their examination.

11. Thirty-five patients (27 males and 8 females) were finally discharged from those previously allowed to leave the Asylum on probation.

2 patients (1 male and 1 female) were discharged on probation from among those who had been transferred to Barkly Asylum Lunatic Branch Wards.

12. Total number of lunatics in the Colony on 31st. December 1907.

	At the Lunatic Asylum.	At the Barkly Asylum Lunatic Branch Wards.	Discharged on probation.	Total.
Males ...	269	70	35	374
Females ...	166	29	28	223
Total...	435	99	63	597

On adding to this number the chinaman, who escaped some time ago, but who has not up till now been recaptured, we had a total of 598 recognised lunatics and imbeciles in the Colony, giving a proportion of total insane to population of 1.59 per 1000 or 1 in 629, i.e., practically the same proportion as in 1906.

The ratio of male and female insane, respectively, to total male and female population, as kindly supplied by the Registrar General, was as follows:—

Male insane 1.86 o/oo of male population. *

Female insane 1.27 o/oo of female population.

Showing a preponderance of male insane, while in England the sexes of such patients are in nearly equal numbers.

13. Number of total insane, and ratio to total population of each class of the Community:—

	Total insane.	Ratio to total population of each class of Com- munity.
General population ...	294	1.806 per 1000
Indian „ ...	290	1.09 „ „
Chinese „ ...	14	2.66 „ „
	598	

This Table shows that in proportion to population there were more lunatics in the General Population than among the Indians. The proportion among the Chinese is the highest, and this can be expected from their habits of opium smoking. But as their population (5,254) is relatively small, too great importance cannot be attached to the ratio obtained.

* Note:—Through a clerical error the numbers entered in last year's report were 2.58 o/oo and 1.85 o/oo. They should have been 1.84 o/oo and 1.26 o/oo, respectively.

14. The percentage of recoveries (cured and relieved) to admissions was 63.02 as compared with 57.6 in 1906.

The percentage of the same to daily average was 17.4 or a trifle higher than in 1906.

15. There were only 23 deaths in the Institution in 1907 as compared with 30 in 1906 and 36 in 1905.

The death-rate to daily average was 5.3 o/o as compared with 7.1 o/o in the previous year.

16. The inmates who died belonged to the following classes :—

	Europeans.	Creoles.	Indians.	Chinese.	Total.
Males	13	2	...	15
Females	3	5	...	8
Total	16	7	...	23

17. Ages of patients at death.

Ages.	Number of patients.			
10—20	1
20—30	3
30—40	5
40—50	5
50—60	2
60—70	6
70—80
80—90	1
Total	23

18. Causes of deaths.

Dysentery	...	...	4
Senile Decay or Debility	...	...	4
General Debility...	...	...	1
Beri-beri	...	...	1
Acute Meningitis	...	...	1
Malarial Fever	...	...	3
Tuberculosis	...	...	2
Cirrhosis of Liver	...	...	1
General Paralysis	...	...	1
Cerebral Congestion	...	...	3
Epilepsy	...	...	1
Scorbutus	...	...	1
Total	...	...	23

19. Five of the patients who died had been admitted into the Asylum in a delicate state of health. Four died within six months of their admission.

The average stay of the others was 8 years—one of them had been in the Asylum for the last 24 years. Five patients (1 male and 4 females) died at the Barkly Asylum Lunatic Branch Wards.

3 male and 3 female probationers were reported by their responsible parties to have died in 1907.

II. *Prevalence of sickness in different seasons of the year and general character of disease prevailing.*

20. The total number of admissions into the two Infirmaries of the Lunatic Asylum was 466 (310 males and 156 females) or 25 more than in 1906.

21. The daily average of sick in the Infirmaries of the Asylum for the last 5 years was as follows :—

	1903.	1904.	1905.	1906.	1907.
Male Infirmary ...	13.82	10.81	16.10	16.11	17.14
Female Infirmary ...	8.99	14.76	11.72	13.21	12.67
Both Infirmaries ...	22.81	25.57	27.82	29.32	29.81

Although there was a slight decrease in the daily average of sick in the female Infirmary as compared with that of 1906, there was an increase in the male Infirmary.

In both Infirmaries taken together the daily average has gradually increased during the last five years.

As shown in the next Table this increase was not due solely to the fact that there was a proportionate increase in the daily average of the Institution, but to a gradual increase in the sick rate since 1903.* Although still considerable there has been a slight reduction in this sick rate in 1907 owing to the high daily average of that year.

22. Sick rate or percentage of daily average of sick to daily average strength.

1903.	1904.	1905.	1906.	1907.
5.8	6.2	6.8	6.99	6.92

The case mortality for total cases treated was 4.6 o/o or 2.2 o/o lower than in 1906.

* NOTE :—This gradual increase in the sick rate is not to be attributed to the personal factor of change in the medical service of the Institution for there has been no alteration in this respect for the last ten years ; nor is it due altogether to a proportionate increase in the daily average of sick from those recently admitted into the Asylum, for, as shown below if we deduct this daily average from that of the total of daily average of sick in the Infirmaries given above, we find that with the exception of a slight fall in 1906 there has been a steady rise in the daily average of sick and a similar one in the sick rate.

Daily average of sick from among those admitted into the Infirmaries within a month of their admissions into the Asylum.

1903.	1904.	1905.	1906.	1907.
—	—	—	—	—
2	1.81	3.67	5.72	2.66

Sick rate or percentage of daily average of sick to daily average strength from among the inmates who had been more than 1 month in the Asylum.

1903.	1904.	1905.	1906.	1907.
—	—	—	—	—
5.33	5.83	5.98	5.66	6.3

23. Table of monthly admissions into the two Infirmaries, total stay, average stay per patient and deaths in 1907.

Months.	Male Infirmary.	Female Infirmary.	Total.	Deaths.
January ...	27	9	36	2
February ...	22	15	37	4
March ...	38	23	61	1
April ...	35	6	41	1
May... ...	29	15	44	1
June ...	22	13	35	2
July... ...	20	10	30	3
August ...	25	10	35	3
September ...	26	22	48	1
October ...	25	16	41	2
November ...	29	9	38	1
December ...	12	8	20	2
Total ...	310	156	466	23
Total stay ...	3,919	3,833	7,752	...
Average stay per patient.	12.6	24.5	16.6	...

24. Admissions into the Infirmaries in each quarter of 1907.

1st. Quarter ...	...	...	134
2nd. „ ...	...	...	120
3rd. „ ...	...	...	113
4th. „ ...	...	...	99

Total ... 466

25. Monthly admissions for malarial fever, dysentery, diarrhoea, tuberculosis and lung affections in both Infirmaries in 1907.

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Malarial fever ...	11	10	35	24	12	12	7	9	7	9	9	7	152
Dysentery ...	5	2	2	2	1	...	1	1	...	1	1	4	20
Diarrhoea ...	3	2	3	1	5	1	2	4	7	1	6	1	36
Tuberculosis ...	...	...	1	...	...	...	1	...	...	...	...	...	2
Lung affections :—													
Viz : { Asthma ...	1	2	2	...	1	1	2	1	4	2	...	...	16
Viz : { Influenza...	...	2	1	3	2	...	...	1	...	...	...	...	9

26. The greatest number of admissions took place as usual in the first quarter of the year, the next in the third, and the least in the last quarter.

On comparing the total admissions in the summer (November to April) and winter (May to October) seasons we find that in 1907, contrary to what was observed in previous years there were exactly as many admissions in one (233) as in the other season. This was due partly to the fact that although malarial fever prevailed as usual in the first two quarters of the year it did not die out altogether in the third, and also to the occurrence in the cooler months of a greater number of cases of diarrhoea among the old and debilitated patients than is generally observed at this time of the year.

27. There was an increase of 36 in the admissions for malarial fever as compared with 1906. There were 110 admissions of the quotidian type, 28 of the tertian, 12 irregular and 2 pernicious cases.

1 of the quotidian type and the two pernicious cases died. The two last named were of short duration and associated with considerable gastro-intestinal disturbance which resulted in early collapse.

28. There were 12 more admissions for dysentery than in the previous year.

The greatest number of admissions took place in the first and last quarters.

The disease was on the whole of a severe type and 4 deaths were due to this cause, 3 of them in the chronic stage. The correlation which has been noted between the increase of admissions for malarial fever and that for dysentery was again observed in 1907.

29. There was a considerable reduction in the cases of influenza during the cooler months, and no deaths occurred from this cause in 1907.

30. We had one death from general paralysis in a female creole patient. This disease is not of frequent occurrence here except among the better class of patients. It appears to be a comparatively rare disease in Indian Asylums, whereas it is one of the commonest in European Institutions of the same kind.

31. One patient died from beri-beri. It had a somewhat insidious onset and serious heart symptoms carried him off in a short time. The diagnosis was confirmed by post-mortem examination.

Prompt measures of disinfection were taken, change of the rice supplied to the Asylum resorted to, and no other case occurred in the Institution.

32. One death was attributed to scurvy in a strong and apparently healthy creole patient, who had spent some time in Madagascar. It was associated with the usual symptoms of swelling and ecchymosis in the legs, with spongy gums. He was treated with lime-juice, vegetables, meat and Easton's syrup, but died from heart complications. It is difficult to account for the occurrence of such a case in an Institution where the dietary is

as varied as it is abundant, and in a patient who had milk, vegetables and meat in his rations. It appears that the disease was very prevalent in the Institution when it was at Grand River, a decidedly malarial locality. It had almost died out since the transfer of the Asylum to Beau Bassin, but its re-appearance may be due to individual susceptibility, to malarial fever and other local climatic influences difficult to define with precision.

III. *Meteorological conditions of the seasons and their probable effect with regard to sickness.*

33. The average temperature of the summer months at the Asylum was 76.8 and of the winter 66.7 as compared with 80 and 70 respectively in the previous year. There was therefore on the whole a cooler temperature by some 3 degrees than had been observed in 1906.

34. Observations were commenced with our rain gauge in March 1907 and the following results were obtained at the end of the year:—

				Number of inches of rain.
March	...	...	...	4
April	...	...	...	8.24
May	...	...	...	4.70
June	...	...	...	4.17
July	...	...	...	.19
August	...	...	...	.0
September	...	...	...	1.26
October	...	...	...	.48
November	...	...	...	4.20
December	...	...	...	11.18

Although our rain measurements appear to have been slightly lower than those taken by others in the vicinity, but situated on relatively higher and more exposed ground, and it is desirable for this reason that we should test our rain gauge by simultaneous observations on another part of our compound, the results obtained, as far as they go, showed that there was a considerable drought in the months of July and August as well as in that of October, interrupted by only slight showers for 2 or 3 days in the month of September.

35. This dry cold season had a beneficial effect in considerably reducing the cases of influenza which generally prevail in July and August, but on the other hand it may have contributed to the increase of the cases of diarrhoea and dysentery, due partly to the chilling effects of the colder season and partly to the increased amount of organic matter in the water supply from the deficient rainfall.

IV. *Other observations concerning the Institution.*

36. The Sanitary Works commenced in 1906 for the extension of the underground drainage of the Asylum referred to in my previous reports have unfortunately been left in abeyance. It is to be hoped that as soon as practicable this important improvement will be taken in hand and satisfactorily completed.

37. The water supply of the Asylum, which consisted partly of river water obtained from Terre Rouge Canal and partly of filtered Mare-aux-Vacoas water from the works at La Marie, has

engaged the attention of the Authorities and it is proposed that the whole supply of the Asylum for drinking and bathing purposes will henceforth be obtained from the latter source. It is satisfactory to record that owing to the greater attention paid to the filters by the Water Authority and the extension of the filtering surface, the quality of this water has improved of late and that even in the dry season no serious complaints were heard against its quality, as was the case so frequently formerly.

38. There were 5 escapes from the Asylum in 1907. Four of which from the outer gardens. They were all recaptured ; three of them by the Police and two by neighbours, and brought back to the Asylum.

39. 2,145 persons, relatives and friends and distinguished visitors, among whom were Professor Ross, C.B., F.R.S., and Major Fowler, visited the Asylum in 1907. They were all satisfied with the treatment of the inmates and left a record to that effect in the Visitors' Book.

40. 14 official visits (3 by appointment and 11 of surprise) were made by the Director of the Medical and Health Department to the Asylum and satisfactory entries made by him in the books.

Fourteen meetings of the Central Board were held in the Asylum to conduct the business of the Institution and one visit to the Barkly Asylum Lunatic Branch Wards. The Board was satisfied with the treatment of the patients and with the good order of the Asylum.

41. One important decision has been arrived at in reference to the discharge of criminal lunatics who have recovered their mental faculties.

There was much reluctance on the part of the Board to recommend such patients to the Governor for discharge on probation owing to the possibility of a relapse—but after mature consideration, it has been decided that it would be inadvisable to keep such patients indefinitely in the Asylum after they have recovered and that they could be discharged on probation under certain conditions.

In the case of a criminal lunatic condemned for a petty offence or of an untried lunatic prisoner charged with some petty breach of the law, for which he would have been condemned to a fine or short period of imprisonment, if he had not been insane at the time, the patient could be recommended for discharge on the same conditions as a non criminal lunatic. In the case however of other criminal lunatics charged with more serious offences the responsible party would be required to undertake in writing to take charge of the patient, to bring him from time to time before the Medical Superintendent and the Central Board till such time as he could be recommended for final discharge.

The responsible party would further give his present or any subsequent address to the Inspector of Police of his District and in case of any relapse he would undertake to bring back the patient at once to the Asylum to be re-admitted.

42. Two cinematograph and three grammophone performances were held in 1907 which generally delighted the patients.

43. The daily average of lunatics employed in 1907 was as follows :—

	Gardening.	Trade.	Household.
Males	19.55	16.05	41.91
Females ... ..	.....	.....	Washing 15.13 Wards 26.34 Sewing 11.38

The savings realised by Government in 1907 by the work of the lunatics and their attendants in the Asylum amounted to Rs. 5,618 or about Rs. 200 less than in 1906. (Vide Annexure A). This reduction was due to the smaller amount of vegetables produced by the gardens on account of the drought in the colder months and also on account of fewer repairs required to the mattresses during the year.

44. The average cost of the diets based on the average prices ruling in 1907 supplied by the Storekeeper General's Department was as follows :—

(1) First class sick. (For Europeans and better class of patients)	Rs. 0.43.39
(2) First class normal. (For Europeans and better class of patients)	Rs. 0.61.68
(3) Second class sick. (For natives)	Rs. 0.45.94
(4) Second class normal average (For natives)	Rs. 0.28.79

There was a slight reduction of cost in the first three diets and a slight increase in the last mentioned one due probably to the relatively higher price of rice.

I append a copy of these diets giving the prices of each article as worked out by the Steward and Accountant. (Vide Annexures B & C.)

J. I. PADDLE,

Medical Superintendent,
Lunatic Asylum.

6th. April, 1908.

ANNEXURE A.

Statement of works, &c., done by the attendants and patients of the Government Lunatic Asylum during the year 1907.

Description of work.	Quantity.	Contract price or Estimated cost.	Amount.		Total.	
			Rs.	c.	Rs.	c.
<i>Garden.</i>						
Green Brèdes	kil. 6,843	R. 0.07 per kilos	479	01	748	09
Potherbs	„ 1,830,700	.14 „	256	29		
Bananas	No. 232	.60 o/o	1	39		
Arrow-root	kil. 60	.19 per kilos	11	40		
<i>Masonry.</i>						
Repairs to drains, walls, &c. ... ..	.....	Estimated	100	...	100	...
<i>* Tinware.</i>						
New Utensils ... ..	.....	Estimated	313	32	451	32
Repairs ... ..	.....	do.	138	...		
<i>Carpentry.</i>						
Repairs to tables, forms, &c. ... ..	.....	Estimated	27	...	27	...
<i>Bedding and Clothing.</i>						
Making of New Mattresses	151	R. 0.50 each	75	50	2,010	30
„ „ Pillows	56	.25 „	14	...		
Repairs to old Mattresses	818	.50 „	409	...		
„ „ Pillows	201	.25 „	50	25		
„ to Strait jackets	1,090	.10 „	109	...		
„ to Clothing	27,051	.05 „	1,352	55		
<i>Sundries.</i>						
Straw hats	208	R. 0.30 each	62	40	2,281	33
„ „ repairs to	70	.05 „	3	50		
*Washing	182,175	1.50 o/o	2,215	43		
Total...Rs.					5,618	04

* After deducting cost of materials.

ANNEXURE B.

FIRST CLASS SICK-1907.

Articles of Diet.	Amount of Diet.	Quantity per 100 Diets.	Price per kilo.	Value of 100 Diets.		Remarks.
				Rs.	c.	
Beef... ..	Kil. 0.225 grs.	Kil. 22.500	Rs. 1.18.17	26	58.82	
Bread ...	.340	34.	.17.30	5	88.20	
Milk ...	1 litre	Litres 100	.09	9	00	
Sugar ...	Kil. 0.045 grs.	Kil. 4.500	.14.24	...	64.08	
Tea ...	.008	.800	1.60.	1	28	
Total ...Rs.				43	39.10	

FIRST CLASS NORMAL.

[illegible]

ANNEXURE C.

SECOND CLASS SICK.

Articles of Diet.	Amount of Diet.		Quantity per 100 Diets.	Price per kilo.	Value of 100 Diets.	
					Rs.	c.
Beef... ..	Kil.	0.225	Kil. 22.500	Rs. 1.18.17	26	58.82
Bread ...		.340	34.	.17.30	5	88.20
Milk ...	Lit.	1.	Lit. 100.	.09	9	00
Rice... ..	Kil.	0.225	Kil. 22.500	.15.59	3	50.77
Sugar ...		.023	2,300	.14.24	...	32.75
Tea ... ..		.004	.400	1.60	...	64
Total ...Rs.					45	94.54

ANNEXURE C. (Continued) :—

SECOND CLASS NORMAL.

Articles of Diet.	Amount of Diet.	Quantity per 100 Diets.	Price per kilo.	Value of 100 Diets.				Remarks.
				Rs.	c.	Rs.	c.	
Bread ...	Kil. 0.225	Kil. 22.500	Rs. 0.17.30	3	89.25	3	89.25	Milk days, 3 times a week.
Butter ...	.010	1.	1.55	1	55.	1	55.
Fresh Fish225	22.500	.53.33	11	99.92	Fish days, 4 „
Milk ...	75&13 Centil :	75&13 Litres	.09	6	75.	1	17.	
Dholl ...	Kil. 0.060	Kil. 6.000	.13.46	80.76	{ Average cost per patient Rs. 0.28.79
Salt fish ...	.060	6.	.33.50	...	...	2	01.
Potherbs ...	.110	11.	.14.	...	...	1	54.
Rice ...	.450	45.	.15.59	7	01.55	7	01.55
Sugar ...	.023	2.300	.14.24	...	32.75	...	32.75
Tea ...	.004	.400	1.60	...	64.	...	64.
Potatoes ...	.225	22.500	.22	4	95.	...	...
Green Brèdes...	.120	12.	.07	...	84.	...	...
Total...				Rs. 25	96.55	30	95.23	

TRANSLATION.

ANNEXURE IX.

EXTRACTS FROM THE REPORT OF DR. MÉNAGÉ, GOVERNMENT MEDICAL
OFFICER OF RIVIÈRE DU REMPART.

1,420 patients were admitted at the Public Hospital of Poudre d'Or in 1907. Of these 982 were males and 438 females.

49 deaths occurred, exclusive of 3 still-born children, giving a death-rate of 3.38 o/o for 1,448 patients treated.

In 27 cases the diagnosis could be verified by post-mortem examination.

* * * * *

Malaria.—Although our principal endemic disease is not responsible for all the deaths ascribed to it, it is nevertheless true that the morbidity from this cause is very high.

Nothing is more desirable therefore than to have this terrible scourge stamped out of the Colony, and with this object in view the mission of Professor R. Ross has been undertaken.

If the only means of dissemination of the plasmodium is the anopheles mosquito, it may be expected that if malaria be not completely eradicated, a marked reduction in its evil effects will be secured. If, on the other hand, the plasmodium pre-exists in the soil where yet it has not been detected, it may be surmised that conveyance to man may be by other channels than

the mosquito, and that the destruction of the latter will therefore not be sufficient to turn uninhabitable localities into healthy ones.

To destroy mosquitoes, an anti-malarial league should be set on foot with Committees in all the localities of the Island.

The initiative in this respect should come from the general public and the members of the league recruited from all classes of the Community.

Here as elsewhere, medical men will have to take their share of the work, and their science, influence and self denial will be largely drawn from.

Dysentery.—Thirty-five patients were treated for this complaint and three died. Fifty-one patients were treated by me in 1906 and 42 in 1905, for the same disease.

My attention has been drawn to the large number of flies, propagating agents of this disease, which are attracted by dysenteric stools. I have tried all sorts of devices to get rid of these insects and I am inclined to believe that chloride of lime is the antiseptic they dislike most.

I have accordingly caused this substance to be used in profusion in the vessels provided to receive the stools of such patients.

Tuberculosis.—Professor Calmette's method for the diagnosis of tuberculosis was resorted to in 9 cases. Conclusions cannot be drawn from such a small number of observations. In any case, it is a neat, rapid and reliable procedure devoid of any danger, and which seems to me capable of rendering valuable service in the detection of latent tuberculosis in schools.

Let early treatment be applied in tuberculosis and the patient is given a serious chance of recovery. The disease cannot therefore be dealt with too early, and thanks to the ophthalmoreaction, we are now in a position to do so.

Diabetes Mellitus.—Cases of diabetes mellitus are becoming more numerous every year.

After perusing the observations of cases of conjugal diabetes the number of which is increasing, the question may be asked whether diabetes mellitus is not a contagious disease. The gums which I have often noticed diseased, might harbour the contagion as suggested by certain observers.

On the other hand, neither polydipsia nor polymia is present in many of these cases and the sugar rapidly disappears with proper dieting.

These observations would tend to indicate that the prophylaxis of the disease might consist in not spitting on the ground, in the disinfection of the linen soiled with saliva and in treating all gingivitis on persons living with diabetic subjects.

* * * * *

Nephritis.—47 patients were treated against 39 in 1906 and 37 in 1905. This increase is alarming inasmuch as no definite cause can be discovered in all these cases.

Whatever this may be, Calcium Chloride in small doses (10 centigrammes daily) has given good results in my hands in the treatment of nephritis of whatever origin, without it being necessary to submit the patients to a strict milk diet which is not accepted by many and is apt to become intolerable after a certain time.

If this treatment does not act rapidly, the dose of Calcium Chloride should be increased to 20 centigrammes, and there should be no hesitation to persevere in the treatment as its effects may not be felt until after three weeks and even a month.

* * * * *

Typhoid Fever.—Two cases were treated and both recovered.

In both, the blood was examined and the sero-reaction proved positive.

Attention should be drawn here to the fact that agglutination is only tardily manifested in enteric fever in Mauritius and to the necessity of finding another means of early diagnosis in this disease. It is true that we have Ehrlich's diazo-reaction, but this process cannot always be trusted as the reaction is also met with in other diseases besides enteric fever.

The ophthalmo-reaction is a valuable means of diagnosis in enteric fever according to Professor Chantemesse. If this assertion be confirmed by other observers, we would gladly avail ourselves of this process for the early detection of a disease essentially contagious in its nature and whose atypical forms in tropical climates are often a bar to correct diagnosis.

* * * * *

Operations.—The operations performed at Poudre d'Or Hospital were 400 in number and are shown in tabular statement.

Out of these, 44 were done under chloroform, 68 under cocaine and 4 under chloride of ethyl. Nine cases ended fatally, two of these from abscess of the liver. Had surgical interference been resorted to earlier, a cure would probably have been obtained. A case of amputation of the thigh also died, the patient was a diabetic subject suffering from gangrene and operated after he had developed septicæmia. A patient operated for perinephretic abscess died from peritonitis. While pointing in the lumbar region, where it was incised, the abscess also burst spontaneously into the peritoneum.

Five patients died from septicæmia, from which they were suffering on admission, although an operation was attempted as a last resource. The prejudice among the lower classes of the population against the hospitals and their dread of surgical interference, are factors which lead many patients to resort to operations only when moribund or when beyond the resources of surgery.

It should, however, be stated that many others, less ignorant willingly resort to surgical means and these, attended to under favourable conditions, generally get well.

Laboratory.—Our small laboratory for microscopical research worked actively during the whole year.

The services which it has rendered us have fully rewarded our efforts to organize it and to train our staff in obtaining specimens for examination.

The following are extracted from our register :—

15 examinations of pus from all sources.
 18 examinations of sputa.
 20 examinations of urine out of which 14 for the detection of bilharzia,
 besides numerous quantitative analyses for sugar, chlorides and albumin.

Numerous examinations of stools for the detection of ova of ankylostoma and of amœbæ in dysentery.

Blood counts had very often to be made and we have been successful in establishing the leucocytic relationship in many cases.

In blood taken at night from a few patients suffering from chyluria, numerous microfilaria have been detected.

ANNEXURE X.

Annual Report of the Government Analyst for 1907.

As usual the work performed by the Government Analyst in 1907 was chiefly for the Judicial Department. Sixty medico-legal analyses and examinations, referring to 299 separate articles or pieces of conviction, were undertaken and reported upon for this Department. Fifty-four analyses and reports were required for the various branches of the Medical and Health Department and 1 for the Prisons Department. These analyses referred to 84 articles

The total number of analyses thus amounted to 114 and the articles examined or reported upon came up to 383.

2. Although there was a reduction of 66 in the number of articles received in 1907 from the Judicial Department, as compared with those of the previous year, there was an increase of 12 in the number of medico-legal investigations, while for the Medical and Health Department and its branches, there was an increase of 9 in the analyses and reports, and of 30 in the samples received.

The Municipality having opened a small laboratory and appointed an analyst for its own use, no samples were received last year from that Department.

3. The difficulties referred to in my previous reports, resulting from the want of a skilled servant permanently attached to the laboratory, have to a certain extent continued and prevented the laboratory from being as useful as it could have been. It is satisfactory, however, to note that new fittings have recently been put up and new apparatus and books of reference received, while permission has been granted to utilise the services of one of the servants of the Lunatic Asylum. Such arrangements will no doubt facilitate the work of the laboratory in future and obviate in a great measure the delays which have necessarily resulted in the return of reports on certain articles sent up for examination.

Analyses performed for the Judicial Department.

4. The 60 investigations performed for this Department were undertaken at the request of the Magistrates of the following districts :—

Districts.	Number of investigations.	Number of articles examined.
Port Louis	16	73
Plaines Wilhems	14	96
Grand Port	6	34
Pamplemousses	7	22
Moka	5	31
Flacq	6	16
Rivière du Rempart	3	13
Black River	2	13
Savanne	1	1
Total	60	299

5. The criminal cases in which they were required were the following :—

Cases.	Number of cases.	Number of articles examined.
Murder	7	55
Attempt at murder... ..	1	5
Rape	16	94
Attempt at rape	5	23
Indecent act on a female child...	1	2
Sodomy	1	5
Infanticide	1	4
Wounds and blows... ..	3	18
Attempt at larceny... ..	1	4
Larceny	1	16
Larceny with wounding	1	19
Larceny at night with breaking.	1	3
Possession of stolen property...	1	2
Poisoning or alleged poisoning.	13	29
Administering a noxious substance	1	5
Selling gunjah without license.	1	1
Illicit distillation	5	14
Total... ..	60	299

6. One of the features of this list is the number of cases of larceny in which the assistance of the Government Analyst was required by the Police for the purpose of throwing additional light on the case. In one or two of these cases traces of blood were found on the clothes of the accused after wounding those who had resisted them.

In one interesting case of larceny at night with breaking, some bars of carbolic soap and goat flesh had among other things been stolen. These articles were not found by the Police in the possession of the accused but a vacoa hand bag which he was seen to carry was afterwards secured in his house and sent for examination. Small fragments of brown carbolic soap were found in the interior of the bag between the vacoa matting while stains of blood similar to that of a mammal were found on his clothes. This evidence served to strengthen the hands of the Police and contributed to his conviction.

In another case of larceny some turpentine which had been stolen was mixed by a chinaman with a certain quantity of petroleum oil in his shop in order to avoid detection by the Police. Samples of the contents of all the petroleum oil tins of the shop were sent for analysis and five samples were reported to have been mixed with turpentine in the proportion of 20, 25, 35, 40 and 50 o/o.

7. In one of the cases of wounds and blows between two Indian women, the accused, to induce the Police to believe that she had been struck by the complainant, had stained her spencer with the blood of a hen. On this information being subsequently communicated to complainant's counsel he requested the District Magistrate to have the garment sent to the Government Analyst. As the latter reported the presence in the stains of well marked oval and nucleated red corpuscles of a bird, there was no difficulty in disproving the counter charge.

8. In the 16 cases of rape which came under examination blood and mucus were found on the clothes of the victim, and, in a certain number of them, on those of the accused. Spermatozoa were only found in 5 cases. In two cases there was evidence of the accused having communicated gonorrhœa to the victim.

Well marked gonococci were found in the discharge obtained from one of the victims, (a small female child), and sent to me by the Government Medical Officer of the District. There was some difficulty at first in clearly demonstrating these micro-organisms in a dry preparation by the ordinary process of staining, but on applying Nicol's modification of Gram's method which was kindly done for me by Mr. Maya at the Bacteriological Institute, there was no longer any doubt as to their presence. This evidence was of great importance in the case, and no doubt contributed to the counsel of accused advising him to plead guilty at the Assizes; for the case for the prosecution appeared to be otherwise weak, and the discharge, which was of some days' duration, might easily have been mistaken for that of leucorrhœa.

9. In the cases of poisoning, marked evidence of poison was found only in three, viz: atropine, nitric acid and carbolic acid. The two first were the result of suicide. The third case was that in which a cow had been maliciously poisoned with crude carbolic acid by an Indian. The tongue and gullet sent

up for examination presented signs of extensive corrosion with detachment of the mucous membrane in some places. As the animal did not die till some hours after the administration of this poison the greater part of it had been absorbed.

In the case of administering a noxious substance, ground glass was found mixed up with food. In one case of alleged poisoning a bitter taste was noticed in some soup. This was shown to be due to the presence of bile from the gall bladder of the fowl, which had no doubt been carelessly removed by the cook.

In an alleged case of poisoning of a dog, the *whole animal* was sent up for examination.

On opening the abdomen it was found suffering from acute peritonitis due to a perforating ulcer of the stomach—no poison of any kind was found in the stomach, intestines or other organs. In a case of this kind it would have been more satisfactory if the animal had been examined locally by a Veterinary Surgeon and only such of the organs as he thought necessary sent up for analysis.

10. Ten bottles of fermented molasses (wash) and 4 of rum were analysed in cases of illicit distillation. The rum was somewhat turbid and varied in strength from 20 to 23° Cartier. I had occasion to examine in Court the stills from which it had been distilled and some of them appeared to be of very ingenious construction. They were all made on the principle of the columnar still head, which more or less concentrates and rectifies the rum, while the wash itself on its way to the boiler, is used as the cooling agent for the condensing worm and other parts of the apparatus, thus obtaining a continuous distillation and avoiding the necessity of using water, which would be difficult to obtain and to get rid of in some places.

One of these stills was of excellent construction and could have produced at least 2 dozen of bottles of rum per day.

Analyses performed for the Medical and Health Department.

11. The analyses and reports required by this Department were as follows :—

Department.	Number of analyses or reports.	Number of articles.
Medical and Health Department	9	13
Sanitary Warden and Assistant Sanitary Wardens ...	12	26
Government Medical Officer, Grand Port	1	1
Government Medical Officer, Plaines Wilhems... ..	1	2
Dispensary Medical Officer, Moka	1	1
Barkly Asylum	26	35
Lunatic Asylum	3	4
Prisons Department	1	2
Total... ..	54	84

12. These analyses and reports had reference to the following articles or subjects :—

Articles or subjects.	Number of analyses or reports.	Number of articles or subjects.
Oil mixture	1	1
Water	4	9
Milk	11	22
Salt fish	1	2
Wine	1	2
Lard	2	2
Curry powder	2	2
Wax	2	3
Disinfectant	1	1
Medicines	1	2
Urine (quantitative analysis of sugar, albumin, &c.,) ...	21	30
Pathological samples (pus, blood, &c.,)	3	3
Vomited matters	1	1
Carbide of Calcium	1	2
Fire extinguisher	1	1
Growth of bamboos near rivers.	1	1
Total... ..	54	84

13. Out of the 22 samples of milk 7 were found to have been watered to the extent of 10 to 40 o/o and in one case to 50 o/o. Four were skimmed and the rest could pass muster, judging from the standard of 8.5 o/o for non fatty solids adopted as a minimum by the Society of Public Analysts and the Board of Agriculture of England, and of 2.5 o/o for the fat, which I have considered advisable to adopt for the inferior and poorly fed cows kept in this Colony by Indians. In one case, although the analyses of the milk obtained from a milk seller showed a percentage of 9.4 in the total solids, while the fat was only 1.2 o/o, on the Sanitary Inspector securing some of the milk of this man's cow, with the usual precautions, percentages of 9.8 and 3.3 respectively were obtained for these two constituents ; showing

clearly that the milk sold to the public had been skimmed and partly watered.

Considering that in judging of adulteration we must fall back upon a minimum when no other standard of comparison is available, the action taken by this intelligent officer might be imitated by others and a sample of the milk of the cow of the milk seller sent up for analysis at the same time as the one seized whenever it is possible for the Inspector to do so.

A form of punishment for adulteration of milk which appears to be in force in Trinidad consists in refusal of the renewal of their licenses to milk sellers convicted of such offence.

In presence of the frequency of the practice of adulteration by the Indian milk sellers here, I submit whether it would not be advisable to consider the application of some such deterrent measure in this Colony.

14. Out of the samples of water analysed, two were sent from Diégo Garcia to ascertain their suitability for drinking purposes, one of them consisting of rain water collected in a tank was of excellent quality. The other obtained from a well contained 17 per 100,000 of chlorine, a heavy proportion of solids, consisting chiefly of salts of magnesia, and it was further contaminated with organic matter of vegetable origin and debris of insects. It was in fact quite unfit for use and should not be resorted to except under conditions of dire necessity.

15. The oil mixture referred to in the previous list consisted of cocoa-nut oil, petroleum oil, carbolic acid and citronella oil. It was used last year as an embrocation, for the prisoners, with the object of protecting their skins from the bites of mosquitoes. It was analysed for the purpose of ascertaining whether it did not contain any traces of arsenic—None was found.

16. The two samples of lard were found to have been adulterated with beef stearin and cotton seed oil. It is a question whether such admixture, if perfectly fresh, should be allowed to be sold. It is evident that it is not unfit for human consumption, but on the other hand, the purchaser, who asks for lard, expects to be supplied with the genuine article. There would, I submit, be no harm in allowing its sale, if, as is done in the case of margarine, it bore a label sufficiently disclosing the nature of the imitation.

17. A report was required from the Government Analyst on the value of the "Minimax" apparatus as a fire extinguisher. I had been present at a demonstration recently made by the agent and was convinced on its usefulness in effectively putting out a fire. This apparatus is based on the principle that water charged with carbonic acid when sprinkled on a burning material easily arrests combustion. Comparative experiments which I made with ordinary water and soda water respectively sufficed to verify this point. The liquid used in the apparatus contains further a substance in solution which the inventors claimed as an effectual preventive of reignition. Although the name of this substance is not disclosed in their prospectus, as it is known that the salts of alumina have this property, it is possible that their secret substance may consist of some such preparation.

There is no doubt however that the "Minimax" is a very useful invention calculated to render great service in case of fire

in a Government Institution, and that no more convenient apparatus could have been devised for grappling with one in its early stages.

18. The question of the advisability of allowing bamboo hedges to grow in close proximity to streams was submitted to me for report. As it is a matter of great importance to the public health I hope a summary of this report will be found of some interest. The question had already engaged the attention of Government in 1888 when a petition from the borderers of river Céré at Flacq was submitted to the General Board of Health for their opinion on the advisability of allowing the said borderers to uproot the bamboos growing on the river side and replacing them with trees. The petitioners had alleged among other reasons "the pollution of the water by the leaves that fall from the bamboo and particularly by the spines that are thickly attached to the sheaths which fall from the stems and young growing bamboo". "These" they said, "entering the mucous membrane of the stomachs and bowels of the people who use the water, cause serious bowel complaints".

The Committee appointed by the General Board of Health to consider the question reported that there was no foundation in fact for such belief.

"Au point de vue médical il n'y a aucune autopsie, aucune observation (que nous sachions) qui aient révélé pareille cause morbide. Le Comité ne peut donc voir dans les allégations avancées que des idées plutôt hypothétiques que réelles, et les croient purement imaginaires".

Moreover they considered that there could not be much danger from these spines as they do not easily become detached from the sheaths when the latter fall into the water.

"Nous ne croyons pas que ces épines abandonnent facilement leurs lieux d'implantation. Lorsque le fait se produit c'est toujours du moment où la désagrégation commence par le fait de la décomposition des tissus, que l'on voit les épines perdre leur dureté, se ramollir et tomber ensuite au fond du vase de l'opérateur. Dans les rivières les choses doivent se passer de même, son détritüs bien vite submergé doit aller au fond de l'eau d'où il doit être pour la suite, et par le courant même des eaux, rejeté sur les berges".

In order to test these statements I made some experiments on a kitten. On shaking up portions of dry bamboo stipules in water in a flask, I found that there was not much difficulty in removing the attached spines and that the greater part floated and others adhered to the sides of the flask. Administered to the kitten in milk these spines caused symptoms of gastro-intestinal irritation indicated by vomiting and muco-sanguineous purging.

As when the stipules are held in the hand considerable irritation of the skin results from the adherence of the spines, which are as sharp as needles, as observed under the microscope, it was to be expected that similar results would have followed their internal administration while still fresh and stiff.

I had heard of the rumour that they were injurious when taken with water and that two deaths had been attributed to this cause.

It is a fact that mischievous persons had used them for doing grievous harm to animals, and a case where this was actually attempted on a human being was recorded by me in my Annual Report for 1905.

Mr. Mazérieux, the able Analytical Chemist of the Agricultural Company has kindly placed at my disposal his valuable experience in the matter. He states as follows :—

“ Il m’a été donné il y a quelques années de cela d’examiner et d’analyser l’eau d’une rivière traversant une propriété où la dysenterie faisait des ravages toute l’année. Les bords de cette rivière étaient plantés de bambous et l’eau examinée renfermait de nombreux duvets provenant de ces bambous.

“ Je ne doute pas un seul instant que la présence de ces duvets de bambous était cause de ces cas de dysenterie, car les personnes des environs qui ne consommaient pas cette eau étaient indemnes.

“ Pour compléter les renseignements fournis dans ma précédente lettre je viens vous relater un cas soumis, il y a quelques temps de cela à mon examen. Il s’agit d’un jeune homme affligé d’une dysenterie chronique rebelle à tout traitement. J’examinais à plusieurs reprises les selles au microscope et rencontrais de nombreux duvets semblables à ceux des bambous. C’est à mon avis ce qui occasionnait le mal.”

The experiments I made and the observations recorded show that there is real danger in using water contaminated with the spines cast off from the bamboo stipules. As such fall off spontaneously from the shoots and are washed down by rains at certain moments, the danger is then considerable.

In the case of the small bamboos used as a hedge at Curepipe and other localities, the danger of planting them too close to streams is quite as great as in the larger varieties; for the spines are found not only on the stipules but on the growing shoots under the sheaths, and these come off very easily as the shoot lengthens.

For these reasons I did not agree with the conclusions of the Committee of the General Board of Health above referred to and submitted that it was advisable in the interest of the public health that no bamboos should be allowed to be grown in close proximity to a stream out of which persons may drink water lower down.

24th. April, 1908.

J. I. PADDLE,

Government Analyst.